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Washington Views

Advance Commerce Department reports credit retail pharmacists with a banner year in 1954. Drug store sales show a gain of 4 per cent over the previous year. Largest gain among major retail groups was that of gas stations—an increase of 9 per cent. Food stores were up 2 per cent while lumber-building-hardware and automotives dipped 4 and 5 per cent, respectively.

Commenting on President Eisenhower's health message, HEW Secretary Hobby sees two major health problems confronting the nation today: (1) costs of medical care, and (2) serious shortages in health services. To meet these problems, the Administration recommends a broad reinsurance program and legislative stimulants for hospital construction and the health professions.

Actually, the reinsurance proposal—with one important exception—is not too different from last year's bill which wound up in legislative limbo. The exception: this year's bill is more specific. It embodies changes favored by insurance commissioners and actuarial experts. However, Mrs. Hobby emphasizes, the reinsurance bill is no cure-all. Simply it would operate in the interests of 99 million persons who now have insurance, and in the interests of 30 million who could buy insurance but haven't.

President Eisenhower has authorized certain Civil Defense officials to procure narcotic drugs by special forms. These forms are to be accepted and filled only during a national emergency caused by enemy attack, one so proclaimed by the President.

Arkansas' Supreme Court has held the state "fair trade" law to be unconstitutional. The court's unanimous decision was based on the part of the act which binds all retailers to a minimum resale price in the manufacturer's contract, even though it is signed by only one retailer. Union Carbide and Carbon had sought an injunction to prevent a retailer from selling Prestone, an auto anti-freeze, at less than $3.75 per gallon. The retailer was selling the product at $2.97.

Are vitamins foods or medicines? The question was up again, this time in Tax Court of the District of Columbia. Five Washington pharmacies were challenging a city sales tax on vitamins, which the tax collector classified as foods rather than medicine. Drugs are exempt under the law.

Rear Admiral Bartholomew Hogan has been installed as Surgeon General of the U.S. Navy to succeed Vice Admiral Lamont Pugh.

Statistics, though incomplete, indicate accidental salicylate ingestion among children accounts for more deaths than any other drug. A special medical advisory panel sponsored by FDA met February 14 and recommended: standardization of "children's aspirin" at 1¼ gr. per dosage unit; development of a container with safety closure for flavored aspirin; label warnings, including an injunction against its use for children under three.

Now is your season

Philadelphia, Pa. "Without question, the 'Benzedrex' display moves the merchandise."

Louis Schwartz

Topeka, Kans. "Sales have doubled since displaying the 'Benzedrex' Inhaler carton."

Ronald B. Hoffman

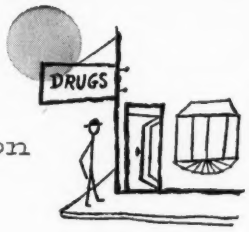
Here's your display

Miami, Fla. "Since installing the 'Benzedrex' display carton, my sales of 'Benzedrex' Inhalers have tripled."

Herman Silverman

Smith, Kline & French Laboratories, Philadelphia

'Benzedrex' T.M. Reg. U.S. Pat. Off.



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Distillates

To a "Committee of Fourteen," HEW Secretary Hobby last month entrusted a big job: evaluate the adequacy of Federal pure food and drug law enforcement. For such a study, the 83rd Congress set aside $21,000. On the committee, which includes outstanding educators, a jurist, and industry leaders, are University of Colorado Pharmacy Dean Charles F. Poe, Robert A. Hardt, Hoffmann-La Roche Inc. vice-president, and the A.P.M.A.'s attorney Charles Wesley Dunn.

✦

Meanwhile, HEW was setting up two other special projects, one, an advisory council on vocational rehabilitation, the other, a group of 19 pediatricians charged with finding out whether isoniazid will prevent development of tuberculous meningitis in children with first-infection TB. Among those named to the council on physically handicapped was Theodore G. Klumpp, president of Winthrop-Stearns Inc.

✦

Civil Service Commission is interviewing registered pharmacists for VA work. Starting salaries range from $4,205 to $5,500. To qualify, applicants must be graduates of approved schools of pharmacy and currently registered. For positions paying $5,060 and above, two years of professional experience or a two-year pharmacy residency is required.

✦

Dr. Hugh Rodman Leavell has been chosen president-elect of National Health Council, made up of nearly 50 health organizations including A.PH.A. Dr. Leavell's background: member of the Hoover Commission medical team, Latin-American tour for the State Department, stint in Europe for U.N., now head of Public Health Practice of Harvard School of Public Health.

✦

Pharmaceutical economic analyst H. W. Adkins, in his new booklet, "Let's Improve Drugstore Personnel," outlines a series of meetings aimed at bettering personnel relations. The booklet is available by writing Crandon Wholesale Drug Company, Miami, Fla.

✦

For the first time since 1950, freshman pharmacy college enrollment is on the rise. American Association of Colleges of Pharmacy notes Fall of 1954 enrollment increased 8.1 per cent over the preceding year.

✦

More men are hospitalized than women, according to a new AMA survey. Findings show in 1953 there were 1,206,592 persons in 6,539 of the nation's 6,840 registered hospitals. In this group, men predominated by 77,720.

✦

Five scientists—one with AEC, the others with the Navy—have come up with a watch-charm radiation measuring device. Called dosimeters, the inexpensive plastic lockets can measure from 10 to 600 roentgens of radiation. More than a million of the dosimeters are going to the military. GI's will be able to wear them on dog-tag chains.

What are your chances of getting cancer? About one in four, says the American Cancer Society, which this year is asking $24 million to expand its research, education, and service. The all-out drive will reach its peak in April—designated Cancer Control Month by President Eisenhower.

✦

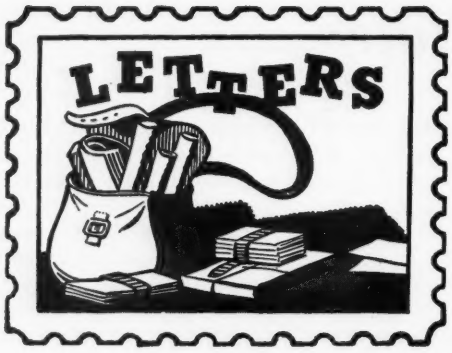
Eleventh annual Seminar Lecture Series for Pharmacists, sponsored by Northern New Jersey Branch of A.PH.A. and Rutgers University College of Pharmacy, will open March 2 at New Jersey State University. Lectures, scheduled for the first four Wednesdays of March, will deal with new drugs and economics.

✦

Dr. Albert Schweitzer, Nobel prize winner and newly-turned octogenarian, recently paid tribute to American pharmacy. Use of American drugs, he said, "produced a miracle" in treating leprosy in the jungle. Later, using sulfones developed in the U.S., he found "after a few weeks the sores became cleaner, and after some months they closed completely . . . . "

✦

Best way to "cure" a faint is simply to leave the victim lying flat, says Dr. Alfred Soffer of New York. In an AMA report, Dr. Soffer pointed out that a faint actually is a cure in itself . . . . it's nature's way of giving the body a short adjustment interval to recover from sudden changes in blood movement. "Contrary to popular belief," he said, "heart disease is rarely responsible for fainting."



More on Over-Commercialization

Sirs:

The letter written by J. George Elm, Pittsburgh, Pa., in the PRACTICAL EDITION for December, 1954, raises a very interesting point. However, I disagree. . . . Today pharmacy is a career far beyond the dreams of the old-time compounding pharmacist, and the pharmacy of ten years from now is way beyond our comprehension. The pharmacist of tomorrow will have to be as well educated in his field as the physician in his. . . .

As for the wish that medical schools teach their students to write prescriptions for the pharmacist to compound, a pharmacy equipped . . . to do this would cost millions. By letting the pharmaceutical companies do this work, we raise our standard from technician to specialist. Although we do not do the initial compounding, we must have a knowledge of dosage reactions, etc., and must study continuously to keep up or else drop out of the profession and become tradesmen.

Redding, Calif. JAMES W. MCGRAW

Sirs:

. . . Today, in the present atomic world, I would venture to say that pharmacy has never had any better recognition than it now enjoys. Every issue of THIS JOURNAL presents some question from pharmacists in every state in the Union concerning compounding procedure, technique, or incompatibility—evidence that our compounding art has not died!

Regardless of the trend of a large percentage of dispensing in our prescription practice, we are called upon many times to compound "secondum artem" from our teammate, the physician. Our colleague seems to overlook the fact that the physician routinely calls upon the pharmacist for drug information, a suggestion in prescription writing, dose, therapeutics of a drug product, etc.

Pharmacy is still and will always be the "beacon of light" to medicine in more ways than one!

In the not too distant future, pharmacists will be dealing in atomic drugs, one of the most complex and potent forms of medication. The five- or six-year students of the future will be highly trained and skillful "instruments" of pharmacy—yes, years away from the so-called "good old days of pharmacy."

To say "let the supermarkets take over" is . . . the way of least resistance and that of a defeatist.

I was fortunate to have attended the convention in Boston in August (frankly, my very first as a member of the A.PH.A.) and I was doubly fortunate to have been present at the all-day session of the prescription clinic of the American College of Apothecaries. I never enjoyed or profited so much from a meeting as I did that day after listening to Drs. Ohmart, Stoklosa, and other prominent men in pharmacy.

Their subjects dealt not with dispensing, but compounding: modern techniques, new ingredients that were never known to our U. S. Pharmacopeia, newer ingredients not yet released. I could go on indefinitely but space would not permit.

I am certain our colleague has a misconception of present and future pharmacy. Awaken to the present challenge and be a pharmacist in the true sense of the word and with the dignity and responsibility it carries! Our compounding art has not expired! Don't underestimate our profession. The word "supermarkets" never belonged in the same sentence with pharmacy!

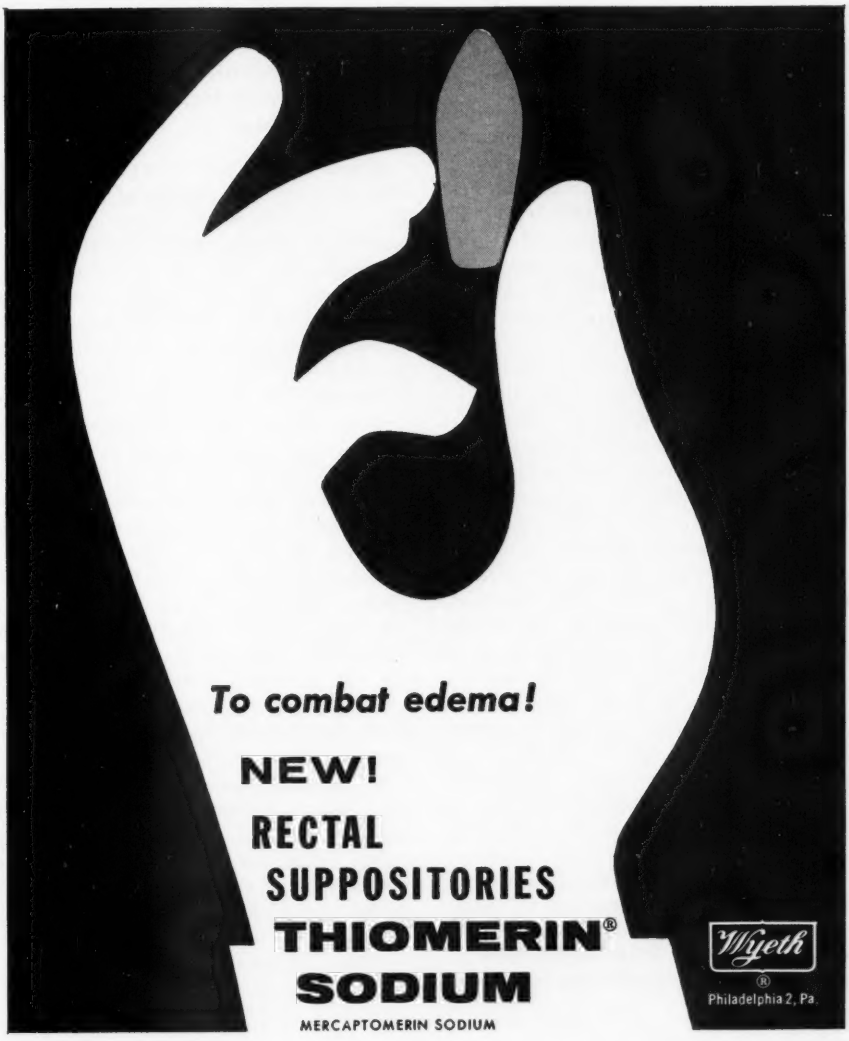
Asbury Park, N.J. F. JOSEPH VENERI

German Pharmaceuticals

. . . I am greatly pleased to have become a member of the A.PH.A., an organization which enjoys my highest esteem.

I stand ready to be of assistance to you, to the A.PH.A. and to the colleagues who are its members whenever you may want any information concerning pharmacy or pharmaceutical preparations in Germany. The Dr. Johannes Klie Rathaus Apotheke, Hamburg 1, which is owned jointly by my brother and myself, will always gladly assist American colleagues with German preparations if any such need should occur. I want you to feel free at any time to use my services.

Hamburg, Germany H. E KLIE



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Progress in Medicine

Reserpine in Mental Disorders

A preliminary report on the use of reserpine (Serpasil) in the management of 74 mentally ill and 15 mentally retarded patients for periods up to seven months indicates beneficial results can be expected. Reserpine was administered orally in an average daily dose of 2 mg.; and some patients received additional parenteral injections. The three investigating physicians state: "We believe that about 80 per cent of psychiatric patients show improvement that is attributable to the alkaloid. Depressed patients become alert and sociable, while the hyperactive, noisy, assaultive group becomes tranquil. The use of restraints, seclusion, and electroconvulsive therapy has decreased by at least 80 per cent since this study began. Remissions have been produced in 20 patients, and 8 have been discharged. In the near future, leave of absence for all patients in remission is contemplated. Even though the dosage of reserpine has been high, side-effects have been infrequent and minor. We do not suggest that reserpine is a panacea in the treatment of the mentally ill and mentally retarded; however, the response of these patients has been so promising that we urge other investigators to evaluate the drug in all types of mental disease. If the results of long-term studies substantially confirm these preliminary findings, reserpine will be the most important therapeutic development in the history of psychiatry."

[Noce, R. H., Williams, D. B., and Rapaport, W., *J. Am. Med. Assoc.*, **156,** 821(Oct. 30, 1954).]

Mental Depression from Prolonged Treatment with Large Doses of Reserpine

Development of psychiatric complications is reported in five patients who were treated for hypertension with several drugs including veratrum alkaloids or pentolinium bitartrate with or without hydralazine hydrochloride and, in every case, reserpine (1–2 mg. daily in 4 and 0.25 mg. daily in 1 of the cases). The mental depression that had developed during therapy cleared in four cases after reserpine was discontinued. The observations emphasize the necessity for keeping maintenance doses of reserpine as low as possible, preferably below 0.25 mg. daily.

[Freis, E. D., *New England J. Med.*, **251,** 1006(Dec. 16, 1954).]

Rauwolfia Alkaloids (Alseroxylon) Alone and with Hexamethonium in Hypertension

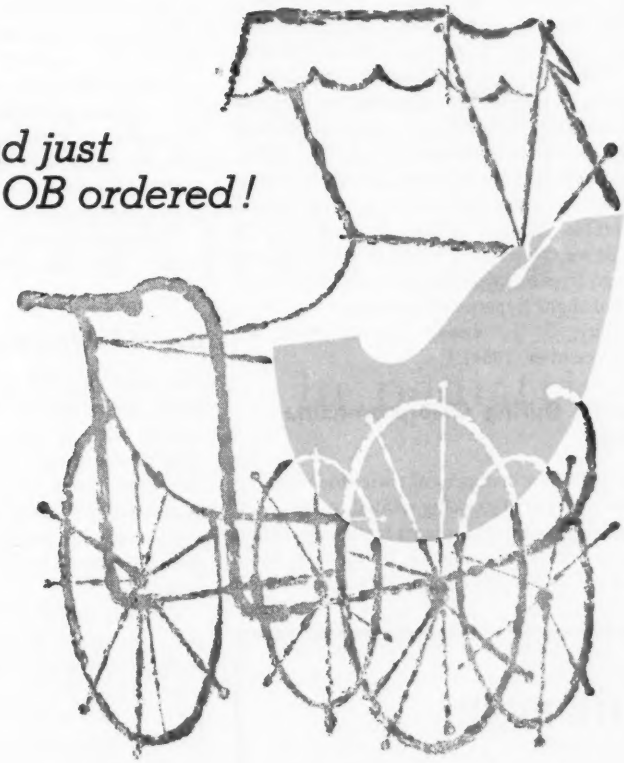
Results of treatment of hypertensive patients with the alseroxylon fraction of the alkaloids of *R. serpentina* (Rauwiloid)—2 mg. four times daily alone or in the same dosage together with oral hexamethonium (125 mg. four times daily as initial dose; increased weekly to maintenance dose)—have been noted in non-hospitalized patients treated for at least a year by a group of six physicians. In a group of 24 patients with hypertension of varying degrees of severity who were treated with alseroxylon alone for one year or more, the response was just as great after 12 months of continuous treatment as it was after the initial six months of therapy. In a group of 66 patients with varying degrees of hypertension who were treated with combined alseroxylon and hexamethonium therapy for at least one year, 89 per cent maintained at 20 mm. Hg or greater reduction in upright mean blood pressure during the 6- to 12-month period of treatment. About half the patients became normotensive. The blood pressure reduction with combined alseroxylon and hexamethonium therapy was primarily orthostatic. The blood pressure reduction with combined alseroxylon and hexamethonium was greater in degree and more stable than with hexamethonium alone, which was used previously under the same conditions of study. The addition of alseroxylon to hexamethonium therapy decreased the incidence and severity of side reactions.

[Dennis, E., *et al.*, *Postgraduate Med.*, **16,** 300(Oct., 1954).]

Oral Veriloid in Hypertension

A study of 13 hospitalized patients, five with essential hypertension, seven with malignant hypertension, and one with a kidney condition causing hypertension, all of whom were treated with oral 1-mg. or 2-mg. tablets of Veriloid is reported by Dr. Enoch J. Saphire. Patients initially received 3 mg. four times a day after meals. This was increased by increments of 2 to 4 mg. a day until a hypotensive or emetic response occurred. Often these effects came simultaneously. The dosage was then adjusted to maintain a sustained hypotensive response. On continuous

***NEW**—and just what the OB ordered!*



Many obstetricians have requested a *phosphorus-free* prenatal capsule. In response, Lederle now offers CYESICAPS, a complete formula, without Phosphorus, containing easily-assimilated calcium lactate. CYESICAPS are dry-filled, soft-gelatin capsules (a Lederle exclusive!), and cause no unpleasant aftertaste. To spread the word about this doctor-requested formula, CYESICAPS are being detailed to obstetricians and GPs, and advertised prominently in all leading journals. CYESICAPS are sure to move fast—right from the start. Get your stock in today!

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administration the hypotensive effect usually appeared one-half to one hour after an oral dose, and the effect appeared to be dissipated within four to five hours. Onset of action and peak of effect were almost simultaneous. Veriloid, a standardized mixture of alkaloids of *Veratrum viride*, administered orally appears to be useful in the treatment of hospitalized patients with malignant hypertension, or in nonmalignant hypertensives with hypertensive damage or symptoms of considerable severity. There appears to be no rationale for the use of Veriloid in the treatment of benign hypertensive patients with few symptoms and slight hypertensive damage.

[Saphire, E. J., *Annals Internal Med.*, **41,** 1211 (December, 1954).]

Jaundice During Chlorpromazine Therapy

Relatively few instances of toxic side reactions have been reported as being related to the use of chlorpromazine, but this report by two physicians indicates that chlorpromazine, in one case, had a hepatotoxic effect that became clinically manifest as an obstructive jaundice. The patient was a 70-year-old woman who was being treated for mental depression with 75 mg. of chlorpromazine daily, in three 25-mg. doses. Jaundice appeared on the fourteenth day of therapy and persisted for forty days, although the drug was stopped on the day the jaundice was noted. Liver biopsy revealed cellular infiltration of the portal area and minimal parenchymal involvement. Convalescence from the jaundice was uneventful. The physicians state that only 6 cases of jaundice during chlorpromazine therapy had been reported previously.

[Zatuchni, J., and Miller, Gladys, *New England J. Med.*, **251,** 1003 (Dec. 16, 1954).]

Use of Polymyxin B in External Ear

A series of 30 cases of otitis externa and infected radical mastoidectomy cavities have been treated with polymyxin B locally. The cases chosen were those in which the infecting organisms were found to be one of the three chief Gram-negative types found in this region, *Ps. pyocyanea*, *Pr. vulgaris*, and *Bact. coli*. Infections caused by mixed organisms were not included.

The preparation used was a solution of 10 per cent polymyxin B sulfate in propylene glycol, acidified with acetic acid. It was supplied to the patients in a bottle, with a dropper, for use at home. They were instructed to fill the ear with the solution, placing the head on one side, with the affected ear uppermost, morning and evening, and then to insert a plug of cotton wool. A swab was taken from the ear for laboratory examination before treatment was begun and another after seven days' treatment. In most cases in which organisms were sensitive the ear was found to be dry at the end of this period.

It appears that the polymyxin B solution is effective in a large proportion of cases against infections of the external ear caused by *Ps. pyocyanea*. To a lesser extent it may clear up infections caused by *Bact. coli*. It is ineffective against *Pr. vulgaris*. These results conform to the *in vitro* sensitivity of the organisms concerned, except that *Bact. coli* appears to be less effectively controlled in the ear than one might expect from its *in vitro* sensitivity. Since *Ps. pyocyanea* infections are often resistant to other antibiotics and other forms of treatment, it is suggested that polymyxin B sulfate solution has a place in their local treatment.

[Farrar, D. A. T., *Brit. Med. J.*, **4888,** 629 (Sept., 1954).]

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'Thorazine' Hydrochloride is also available in 1 cc. 25 mg. ampuls, boxes of 6 ($3.12 box); 2 cc. 50 mg. ampuls, boxes of 6 ($4.38 box); 10 mg. tablets, bottles of 50 ($2.13) and 500 ($20.24); 25 mg. tablets, bottles of 50 ($3.03) and 500 ($28.79); 50 mg. tablets, bottles of 50 ($4.23) and 500 ($40.20); 100 mg. tablets, bottles of 50 ($5.70) and 500 ($54.50).

Alert pharmacists check their 'Thorazine' stock often. Don't be caught out of stock on any dosage form of fast-moving 'Thorazine'.

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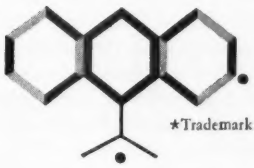

*Trademark for S.K.F.'s brand of chlorpromazine.

℞ information service

Members of the American Pharmaceutical Association are invited to submit their professional problems to The Journal, 2215 Constitution Ave., N. W., Washington 7, D. C., giving all pertinent details in your first letter.

Sale of Alcohol by Pharmacist

Can a pharmacist fill a prescription for 1 oz. of ethyl alcohol legally when he purchases alcohol in small quantities and does not have a Federal retail liquor dealer's license?—R. Q. R., Florida.

[The following reply was received from the Director, Alcohol and Tobacco Tax Division, U.S. Treasury Department, Washington, D.C.]

"The Federal Government does not issue licenses to retail liquor dealers. It is assumed that you are referring to the special tax stamp which is issued upon payment of occupational tax as a retail liquor dealer.

Druggists are not authorized to bottle alcohol for sale on physicians' prescriptions. Ethyl alcohol must be sold in the container in which purchased. It is packaged by proprietors of industrial alcohol bonded warehouses into one-half pint, pint, quart and gallon containers and should be purchased and sold in such containers, whether by prescription or otherwise. Pharmacists or druggists who engage in the sale of ethyl alcohol in quantities as above set forth must pay special tax as retail liquor dealers."

Sterile Solutions of Codeine and Morphine

How can colorless, sterile solutions of morphine or codeine salts be prepared? Does the development of color indicate loss of potency?—R. M., New York.

Discoloration of the solutions is not a direct indication of decreased analgesic action, according to Foster, Macdonald, and Whittet, *J. Pharm. and Pharmacol.*, **2,** 673(1950). They report that solutions of morphine sulfate (2.5%) with 0.2% of chlorocresol and 0.1% of sodium bisulfite were sterilized by heating at 100° for 30 minutes, and that the products were satisfactory.

Medicated Lime Water and Olive Oil Emulsion

Would you please give me some information about the following prescription?—C. P. P., Massachusetts.

Zinc oxide	*dram iii*
Hydrous wool fat	*oz. ss*
Coal tar solution	*min. xl*
Olive oil	*oz. i*
Lime water	*oz. i*

M. ft. lotio
Sig. Apply daily.

This prescription is identical with one that is discussed in "Remington's Practice of Pharmacy," 10th ed. (p. 1251), published by the Mack Publishing Co., Easton, Pa. A stable oil-in-water type of emulsion can be prepared as follows: Dissolve the hydrous wool fat in the olive oil with gentle heat; triturate the zinc oxide and the coal tar solution together until most of the alcohol (which might break the emulsion) is evaporated, then add this to the oil solution and mix well. Add the lime water in small portions with thorough trituration to emulsify each portion.

Medicated Lime Water Emulsion

How should the following prescription be compounded?—G. P., Massachusetts.

Phenol		0.75
Menthol		0.25
Zinc oxide		15.00
Talc		15.00
Burow's solution		5.00
Olive oil		30.00
Lime water	*ad*	120.00

M. ft. Lotio

This prescription should be considered fundamentally as a lime water and olive oil emulsion in which the other ingredients are incorporated. This type of preparation is discussed in an article entitled "An Investigation of Lime Water Emulsions," by J. L. Lichtin and A. Lichtin, THIS JOURNAL, **14,** 295(May, 1953). An important consideration in this type of preparation is the oil and lime water volume relation. The product would probably be more stable if the olive oil were increased to about 50 ml. if the lime water is added to make 120 ml. of the finished preparation. The phenol and menthol would be dissolved in the olive oil, and the zinc oxide and talc would be mixed with the solution, then the lime

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comprehensive formula—supplies liberal amounts of 10 valuable vitamins, and 11 important minerals...available at a price to meet the average pocketbook.

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extensively promoted—kept uppermost in your doctors' minds by widespread detailing programs.

Each ABDOL With MINERALS Capsule contains:

Vitamin C (ascorbic acid)	50 mg.
Vitamin B_2 (riboflavin)	2.5 mg.
Vitamin B_{12} (crystalline)	1 mcg.
Vitamin B_6 (pyridoxine hydrochloride)	0.5 mg.
Vitamin B_1 Mononitrate	2.5 mg.
Nicotinamide (niacinamide)	20 mg.
Vitamin A	5,000 units
Vitamin D	1,000 units
Calcium Pantothenate	2.5 mg.
Folic Acid	0.1 mg.
•Iodine	0.15 mg.
•Manganese	1 mg.
•Cobalt	0.1 mg.
•Potassium	5 mg.
•Molybdenum	0.2 mg.
•Iron	15 mg.
•Copper	1 mg.
•Zinc	0.5 mg.
•Magnesium	1 mg.
•Calcium	44 mg.
•Phosphorus	34 mg.

•Supplied as potassium iodide, dicalcium phosphate, sodium molybdate and the sulfates of manganese, cobalt, potassium, iron, copper, zinc and magnesium.

ABDOL With MINERALS Capsules are supplied in bottles of 100 and 250.

MEDICAMENTA VERA — PD CO.

Parke, Davis & Company
DETROIT, MICHIGAN

SOME PHARMACEUTICAL AIDS OF ATLAS
Span®
emulsifiers — sorbitan fatty acid esters, lipophilic in action.
Tween®
emulsifiers — polyoxyethylene derivatives of sorbitan fatty acid esters, hydrophilic in action.
Arlacel®
emulsifiers — light-colored lipophilic products, including W/O emulsifiers.
Sorbo®
70% sorbitol solution, for bodying action and humectant purposes.

These adjuncts, widely adapted by pharmaceutical manufacturers for their standard products, may be obtained for extemporaneous compounding from the following suppliers:

Boston, Mass.
Gilman Brothers, Inc.
100-112 Shawmut Ave.

Cincinnati 6, Ohio
Hill Top Research Institute, Inc.
925 Wm. Howard Taft Road

Los Angeles 21, Calif.
Mefford Chemical Co.
1026 Santa Fe Ave.

New York 11, N. Y.
Ruger Chemical Co.
101 Seventh Ave.

Portland 10, Ore.
Van Waters & Rogers, Inc.
3950 N.W. Yeon Ave.

San Francisco 19, Calif.
Braun-Knecht-Heimann Co.
1400 16th St.

Seattle 4, Wash.
Van Waters & Rogers, Inc.
400 First Ave., South

Wilmington, Del., Laboratory Center, Inc.
919 Washington St.

CHEMICALS DEPARTMENT
ATLAS POWDER COMPANY
WILMINGTON 99, DELAWARE

℞ *Information*

water would be added gradually with constant agitation and finally the Burow's solution would be added slowly with continued mixing.

Inventory Control

I am interested in an inventory system suitable for a store filling 40 prescriptions daily and with a gross business of $20,000 monthly.—C. H., Illinois.

If you are specifically interested in methods for controlling inventory, you might look into the "purchases-to-sales" plan which is used by many chain store outlets and by some independent pharmacies. The system controls purchases to conform with sales. For example, if your gross margin in the prescription department has been about 45% and you anticipate prescription volume during the next month to be $2,500, the purchases in this department during that month should not exceed 55% of $2,500, or $1,375. Similar consideration is given to each department. Occasional heavy buying for special periods will not conform to the general plan, but it will usually work satisfactorily over a period of months.

Aldinamide

What is Aldinamide used for and who makes it?—M. K., Washington, D. C.

Aldinamide is also known as Pyrazinamide (Lederle). It has been tried experimentally in the treatment of tuberculosis by oral administration.

Neuro-Trasentin

Can you send us any information about a product called "Neuro-Trasentin"?—L. R. P., Illinois.

Neuro-Trasentin is listed as a European tablet preparation containing in each tablet: Trasentin, 20 mg., and phenobarbital, 20 mg. (Ciba). There is available on the American market a Ciba product, Trasentine-Phenobarbital, which contains in each tablet, Trasentine, 50 mg., and phenobarbital, 20 mg.

Tablet Triturate Mold

Can you inform me of a source of supply for a tablet triturate hard rubber mold of one-half and one-grain size?—I. L. L., Ohio.

The catalog of the Arthur Colton Company, 2600 East Jefferson Ave., Detroit, Mich., lists the item as "No. 3 Triturate Mold."

New
Pharmaceutical Elegance
FOR A STANDARD SEDATIVE

LUMINAL®
OVOIDS

Distinctive • Sugar Coated • Oval Shaped

Easy Color Identification of Dosage Strength

¼ grain (yellow)
½ grain (light green)
1½ grains (dark green)

Bottles of 100 and 1000

LUMINAL: Pioneer Brand of Phenobarbital
Over 30 Years of Manufacturing and Clinical Experience

Winthrop Stearns INC.
NEW YORK 18, N. Y. WINDSOR, ONT.

Collector's CORNER

By George Griffenhagen

Identifying Antiques

Collectors of pharmaceutical antiques as well as museum personnel and historians are frequently faced with the task of identifying pharmaceutical equipment: determining date of origin, period of use, the manufacturer. Newspaper advertisements, early pharmaceutical journals early pharmacy textbooks (such as Procter's or Parrish's), and original invoices, journals, day or waste books of operating pharmacies are all valuable sources of information; but all have decided limitations. No single source of information, save well-documented and readily available museum collections, is as valuable and informative in documenting pharmaceutical equipment as the early pharmaceutical manufacturers' or wholesalers' catalogs.

Unfortunately, it has ever been the habit of house cleaners to throw away catalogs and journals, while keeping textbooks. According to Karl Baer, librarian of the AMERICAN PHARMACEUTICAL ASSOCIATION, libraries also have had a hand in this type of house cleaning due to "lack of staff, space and historical sense."

There are fortunately several excellent collections of 19th century catalogs still extant in this country. The Armed Forces Medical Museum (Washington, D. C.) owns a sizable collection of surgical instrument catalogs dating back to 1830, while the American Institute of the History of Pharmacy (Madison, Wis.) possesses a large number of late 19th century pharmaceutical catalogs in the Kremers Archives. A complete set of the beautifully illustrated Whitall-Tatum catalogs is still intact in the archives of the Armstrong Cork Company (Lancaster, Pa.)

A few collectors of pharmaceutical antiques own small collections of catalogs, among them William Gould of Baltimore, Md. Today more attention is being paid to collecting catalogs, especially by historical societies. The Chicago Historical Society, for example, is spending considerable time and expense in building a collection of catalogs relating to all industry in the area.

The earliest published American pharmaceutical catalog known to this author is entitled *Catalogus Medicinarum et Pharmacorum*, printed by John Dunlap, Market Street, Philadelphia, 1771. An original copy, complete with handpenned prices for a majority of the drugs listed, is preserved in the Rare Book Collection at the Library of Congress. Included in the catalog are two pages devoted to a list of "Shop Furniture" such as mortars and pestles, weights and scales, spatulas, pill boxes, and a variety of glassware and other forms of drug containers. Another early *Catalogue of Drugs, Medicines & Chemicals, Sold Wholesale and Retail* is that of "Joel, and Jotham Post, Druggist, Corner of Wall and William Streets, New York, 1804." This catalog includes 14 pages of "Miscellaneous Articles," including pill boxes, mortars, scales, sieves, glassware (bottles, vials, etc.), and crockery ware (ointment pots, jars, gally pots).

One of the most valuable and interesting of the early pharmaceutical catalogs is that of George W. Carpenter, wholesale druggist of Philadelphia, first published as a supplement to his *Essays on Some of the Most Important Articles of the Materia Medica*, Philadelphia, 1834, and featuring a four-page "List of Articles Which should be purchased by a Druggist at the Outset of his Business." Fortunately a number of copies of Carpenter's catalogs are extant, two copies being preserved in the library of the AMERICAN PHARMACEUTICAL ASSOCIATION.

Should any of our readers have one or more 19th century pharmaceutical catalogs which they are willing to part with, either the Archives at AMERICAN PHARMACEUTICAL ASSOCIATION or the Division of Medicine and Public Health, Smithsonian Institution, would be pleased to add them to their respective collections. On the other hand, if you have (or know of) a collection of such catalogs not mentioned above, we would appreciate learning of them. Address your letters to "Collector's Corner" in care of THIS JOURNAL.

Upjohn

best-seller for 28 years!

Cheracol*

Each fluidounce contains:

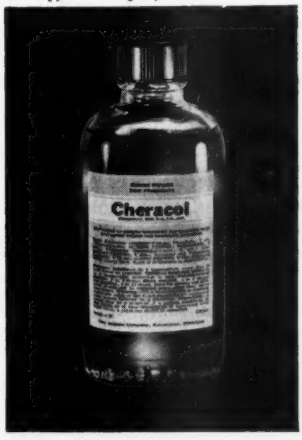
Codeine phosphate . . . . . 1 gr.
Chloroform . . . . . 2 grs.
Potassium guaiacolsulfonate 8 grs.
Ammonium chloride . . . . . 8 grs.
Antimony and potassium tartrate . . . . . 1/12 gr.
Alcohol 3%
With white pine and wild cherry bark

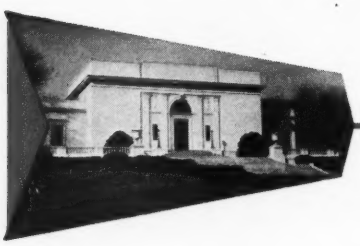
Supplied:

Bottles of 2 and 4 fl. ozs., pint, and gallon

*Trademark, Reg. U. S. Pat. Off.

The Upjohn Company, Kalamazoo, Mich.





STRAIGHT FROM HEADQUARTERS

ROBERT P. FISCHELIS, EDITOR

February Meeting of the A.PH.A. Council

THE annual meeting of the Council of the AMERICAN PHARMACEUTICAL ASSOCIATION for the approval of the budget and transaction of interim business was held in Washington on February 3 and 4, 1955. There was a full attendance of Council members, with the exception of Dr. Robert L. Swain, who was prevented from being present by illness.

Cognizance was taken of the demise of the late Roy L. Sanford since the last meeting, and a committee consisting of George A. Moulton and John B. Heinz submitted a statement of appreciation in memory of Mr. Sanford which was adopted and ordered to be sent to Mrs. Sanford.

Mr. R. Q. Richards was elected by the Council to fill Mr. Sanford's unexpired term.

It was reported that receipts for the calendar year 1954 had exceeded expenditures by $9,602.08 and a budget projecting expenditures of $478,281.00 was approved for the ensuing year. This budget includes the JOURNALS, National Formulary, and other publications, maintenance of building and grounds, necessary building renovations, and general operating expenses.

President-elect John B. Heinz reported on the recent meeting of the Third Pan-American Congress of Pharmacy and Biochemistry held at São Paulo, Brazil, at which he acted as chairman of the American delegation.

Mr. Heinz stated that the Fourth Pan-American Congress will be held in the United States in 1957. The Council decided to arrange for the customary convention of the AMERICAN PHARMACEUTICAL ASSOCIATION in April of that year and recommended holding the Pan-American Congress in the fall of 1957.

Mr. Newell Stewart and Dr. Don E. Francke as co-chairmen of the A.PH.A. Committee on International Relations will have charge of the preliminary arrangements for the Congress.

Chairman Jenkins of the Council, who presided over the two-day meeting, reported on the organization of a pharmacy section in the A.A.A.S. at its recent meeting in San Francisco. President Stewart reported that he had attended some 22 meetings of state and local organizations and was scheduled to attend an additional 16 meetings prior to the Miami Beach convention.

Secretary Fischelis reported that total membership in the ASSOCIATION had reached an all-time high and that Student Branches were now located in all but one of the accredited colleges of pharmacy in the United States with over 12,000 pharmacy students holding membership in these organizations.

Activities of Local and Student Branches and future programs for the development of these organizations were discussed following a report by Mr. Charles Rabe, who has been giving special attention to membership activities since his appointment as assistant to the secretary.

The Council decided to continue the special three-year membership program for recent graduates of colleges of pharmacy.

Reporting for the Committee on Property and Funds, President Newell Stewart called attention to the recent addition of a room to house expanding stacks in the library at the headquarters building and to the need for additional space to house the ever-increasing ASSOCIATION activities.

Chairman Francke of the Committee on Publications reported on the present status of publications including the National Formulary, the journals, and special publications of the ASSOCIATION.

Attention was directed to communications that had been received with reference to the publication of a Table of Antidotes for

Poisons as a part of National Formulary X and, after detailed discussion, the Council adopted the following statement to be issued with regard to this subject:

"Responding to an insistent demand on the part of pharmacists for a Table of Antidotes for Poisons to be used as a basis for information in emergencies and to make such a table constantly and readily available in the pharmacies of the United States, the Council of the AMERICAN PHARMACEUTICAL ASSOCIATION at a meeting held in Washington on February 4, voted to issue a Table of Antidotes for Poisons to be prepared by a special committee (not the Committee on National Formulary) for distribution to all purchasers of the National Formulary X. This table is not to be bound with the pages of the National Formulary, but will be distributed as a separate pamphlet with each copy of National Formulary X."

Reports on the activities of the laboratory were made by Chairman George D. Beal of the Advisory Committee on the Laboratory and Dr. Samuel Goldstein, Director of the Laboratory. Reports on the *Scientific Edition* of the JOURNAL and present status of revision of the National Formulary were made by Dr. Justin L. Powers.

The Council recorded its opposition to the transfer of the Federal Bureau of Narcotics from the Treasury Department to the Department of Justice as is proposed in S.J.R. 19. It endorsed action taken by the Secretary in assisting State Pharmaceutical Associations in the preparation of argument against the lowering of standards for licensure in the several states and in opposing any breakdown in the standards for protection of the public against the distribution of drugs by unqualified persons.

The Council also decided to oppose any definition of the term "proprietary medicine" for inclusion in State pharmacy laws which is based upon whether or not such products are advertised to the public. It was decided to urge that such definitions be based on the protection of the public health.

Appointment of members to the committees on expansion and development, and study of permanent organization of the A.PH.A. were made with the understanding that announcement of names of such committees be withheld pending acceptance of appointment by the individuals concerned.

Dr. George P. Hager and Dr. Elmer B. Vliet were reelected for 3-year terms as members of the Editorial Advisory Board of the *Scientific Edition* of the JOURNAL.

The program of the Miami Beach convention was discussed in detail and the following committee appointments were approved:

Co-chairmen of the Convention Committee: John Stadnik of Miami Springs and David M. Weaver of Miami; Vice-Chairman, Anna D. Thiel of Hialeah; Secretary, Jack Davis of Miami Beach. Mr. Davis is also secretary of the Miami Branch of the AMERICAL PHARMACEUTICAL ASSOCIATION.

Mr. H. W. "Tommy" Adkins of Crandon Wholesale Drug Company, Miami, has accepted the chairmanship of the Committee on Finance, with Charles F. Allen of the Tampa Drug Company, Tampa, and E. Clayton McClendon of McKesson and Robbins, Inc., Miami, as vice-chairmen.

Health Career Horizons

THE National Health Council, supported by a substantial grant from the Equitable Life Assurance Society, will release a publication outlining careers in the professions dealing with public health on February 21, 1955, at the annual convention of the National Association of Secondary School Principals held in Atlantic City.

Termed "Operation Health Career Horizons," the program is designed to broaden the high school student's concept of all matters pertaining to health and to increase the recruitment of American youth in the various branches of the health professions so as to provide more fully the health services the people need, demand, and are willing to pay for.

This project is keyed to the seven million young men and women in America's 26,000 secondary schools. It has the interest and cooperation of the leaders of the country's health education and vocational guidance groups.

There has been considerable discussion among vocational guidance leaders about the value of vocational guidance material sponsored by various professional and vocational groups who are recruiting personnel for their own industry or profession. There is a distinct demand for less glamorized and more factual information for young people earnestly seeking careers of service to humanity as compared with the mere desire

(Continued on Page 114)

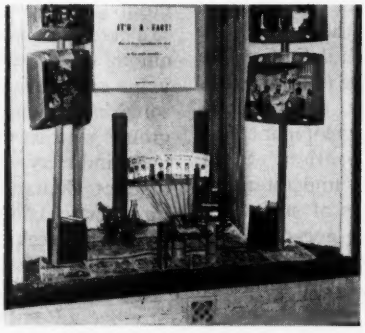
Display (above) won third place in Retail Pharmacy contest for Henry D. Kehr of Trenton, N. J., while Kappa Psi Fraternity (below), College of Pharmacy, University of Arizona, took second in Public Exhibit competition.

Pharmacy Week Awards

LAST month when 1954 National Pharmacy Week Chairman J. Warren Lansdowne and his committee sat down to assay the 1954 National Pharmacy Week Observance, new records were everywhere at hand, all of them as favorable as they were impressive.

In nearly every phase of Pharmacy Week promotion, planners of the 28th annual observance could point to more releases, more and expanded radio-television-press coverage, more general contacts with the public. The over-all result: far wider observance of National Pharmacy Week in 1954 than in any previous year.

Mailed, for example, was approximately twice the number of participation material kits that went out in 1953. Committee members also noted about 40 per cent of the orders came from persons outside the AMERICAN PHARMACEUTICAL ASSOCIATION membership. All told, the orders comprised nearly 20,000 pieces of Pharmacy Week material.



Included, significantly, were hundreds of copies of the Code of Ethics. On top of this, 50,000 retail drug establishments, hospital pharmacies and other units were mailed display contest announcements and window strips.

Meanwhile television, radio and newspapers were busy telling the Pharmacy Week story. Newspaper coverage included numerous editorials. Some 13 state governors and 36 mayors marked the Week with official proclamations.

But at the January session of the committee, Chairman Lansdowne, Walter M. Chase, George F. Archambault, and John A. Lynch, had something other than records to look at. It was their task to choose the top display photos from entries submitted by college units, hospital pharmacies and retail pharmacies. After hours of deliberation the judges picked these prize-winners:

Retail Pharmacies—1) Milton A. Friedman of Baltimore, 2) Joseph A. Hailer

This entry by St. Vincent's Hospital Pharmacy, Toledo, Ohio, placed second among hospital-clinic entries.

Winning second place among colleges was the Student Branch, School of Pharmacy, University of Maryland.

of Los Angeles, 3) Henry D. Kehr of Trenton, N. J.; Honorable mention: Miss Lillie Mazzara and Sam S. Romano of Birmingham, Ala., Adolph J. Toller of Sioux City, Iowa, William H. Geiser of Fremont, Ohio.

Public Exhibits—1) Student Branch, Medical College of Virginia, School of Pharmacy at Richmond, 2) Kappa Psi Fraternity, College of Pharmacy, University of Arizona, 3) Interfraternity Council, School of Pharmacy, University of Pittsburgh.

Pharmacy Colleges—1) Department of Pharmacy, Philadelphia College of Pharmacy & Science, 2) Student Branch, School of Pharmacy, University of Maryland, 3) School of Pharmacy, Temple University, Philadelphia.

Hospitals and Clinics—1) Springfield (Ohio) City Hospital, Walter M. Frazier, chief pharmacist, assisted by Daryl A. Waishaar, hospital pharmacy intern, 2) St. Vincent's Hospital Pharmacy, Toledo, Ohio, Anne Bruggeman, pharmacist, 3) Massilon (Ohio) City Hospital, William Slabodnick, chief pharmacist.

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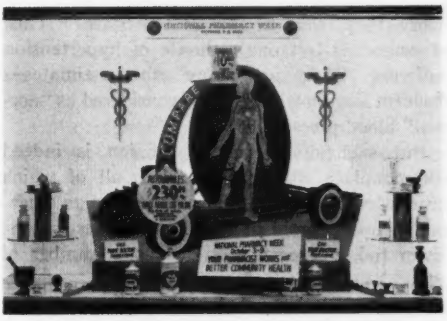
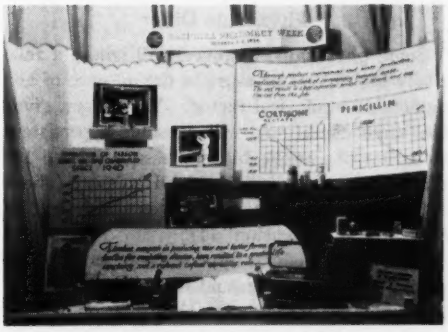


This display won second place in retail competition for Joseph A. Hailer of Los Angeles.



Student Branch, Medical College of Virginia, School of Pharmacy, received the top public exhibit award.

Featured on Cover

Top, Milton A. Friedman, Baltimore first in Retail; lower left, Philadelphia College of Pharmacy & Science, first in colleges; lower right, Springfield (Ohio) City Hospital, first in hospital-clinic.

Hypertension—A Review for Pharmacists

By Samuel W. Goldstein

In the neighborhood of 15 million persons in the United States today—better than 10 per cent of the population—have hypertension or above-normal blood pressure, according to one estimate. Here Dr. Goldstein, A.PH.A. laboratory director, reviews recent strides made by investigators in combating common hypertensive ailments.

IN A FRENZY of study, researchers in the past five years have illuminated broad vistas into the hitherto cloudy world of hypertension or, more commonly, high blood pressure. And perhaps as notable as any one of the recent findings is proof that a rather common form of hypertension in women does not constitute a serious threat to life. Or to good health, for that matter.

Now a host of new drugs is being used to combat hypertensive ailments which trouble one in every 16 persons in the United States. This, of course, is but one estimate of hypertension sufferers. There are many other estimates—each turning on what is to be considered as "normal" blood pressure.

But such divergence of opinion is indeed commonplace with hypertension, all of which hints why the ailment for years proved an amazingly elusive problem for clinical investigators. Even today hypertension means a number of things to a number of people.

The pharmacist and the layman generally use the term in referring to a symptom—high blood pressure—rather than a disease. This smacks of oversimplification, but it has one important advantage: it's specific.

Physicians Differ

Some physicians, however, will ignore a relatively high blood pressure in the absence of any detectable etiological factor. Yet others, given the same conditions, will consider a persistent elevation of systolic blood pressure (above 150 mm. of Hg) and diastolic blood pressure (above 100 mm. of Hg) as positive establishment of "essential hypertension" (1).

Perera (2) defines hypertension as "the repeated finding of a casual diastolic pressure of 90 mm. of Hg or more after the exclusion of those [patients] with transient rises in blood pressure, those with marked obesity and those with possible arteriosclerotic causes." He goes on to define *hypertensive vascular disease* (primary or essential hypertension) as a disorder characterized by the presence of hypertension when it is not secondary to a known primary pathologic process.

"Confession of Ignorance"

In differentiating *benign* and *malignant hypertension*, Perera says the latter term "is diffuse in its meaning, prognostic in its implications, and truly a confession of ignorance. It is often contrasted with benign, another unfortunate and misleading adjective." Pickering (3), perhaps, has voiced a more positive view: "...It is perfectly obvious that more than one mechanism can produce hypertension...[and] the only way we can define [it] is on the blood pressure, recognizing that it is an arbitrary definition."

In this hypertensive welter, two items remain fairly stable. They are the values used to determine the pressure of circulating blood on the internal arterial walls: the diastolic or the pressure between heartbeats, and the systolic or the peak pressure when the heart is forcing blood through the arterial system. Pressure is usually measured by the wrap-around-cuff and mercury manometer, a modification of the cuff-and-mercury-column sphygmomanometer invented by S. Riva Rocci of Italy in 1896.

Drugs Reducing Blood Pressure

Today, once a physician discovers what he considers hypertension, he has at his prescriptive command numerous drugs, not all of which act in fixed and inflexible ways. Among the more recent innovations are hexamethonium salts (ganglionic blocking agent); hydralazine hydrochloride (vasoconstrictor center depressant); and the hydrogenated ergot alkaloids (depressant to

vasoconstrictor center with some peripheral adrenergic blockade). Each of these agents is useful in certain cases of hypertension but each can cause untoward side reactions—especially objectionable in mild hypertensives of neurogenic etiology where the hypotensive drugs might elicit more severe reactions than the symptoms of the disease. Among the newer synthetic drugs, pentolinium tartrate, developed in England and now available in the United States, appears to be a more easily controlled ganglionic blocking agent, particularly in cases of severe fixed diastolic pressure.

Value Appears Doubtful

The value of nitrites and xanthines, such as aminophylline, when used for the treatment of hypertension appears to be doubtful. Thiocyanates are used infrequently because of the toxic side reactions that have been noted (4).

It was known for a long time that extracts of the rhizome and roots of *Veratrum viride* (green hellebore) would lower the blood pressure, but it has only been in recent years that relatively pure extracts and alkaloidal fractions which could be standardized with regard to their hypotensive potency have been available. Regulation of dosage, particularly when administered orally, and frequency of side reactions, particularly nausea and vomiting, have caused some discomfort in their use. A recent report on a study of hospitalized hypertensive patients describes the oral administration of alkavervir (Veriloid) starting with 3 mg. four times a day, and increasing the dosage until a hypotensive or emetic response occurred (5). It was noted that these effects often came simultaneously. The reporter concluded that oral alkavervir appears to be useful in the treatment of hospitalized patients with malignant hypertension or in malignant hypertensives with hypertensive damage or symptoms of considerable severity. But he holds that there appears to be no rationale for its use in benign hypertensive patients with few symptoms and slight hypertensive damage.

Now a new alkaloid fraction has been separated from *V. viride*. Named cryptenamine, this alkaloid fraction is claimed to have a high degree of safety while exhibiting the central neurogenic vasodilator effect noted with earlier *V. viride* products. It is administered orally and is stated to produce positive, sustained falls in blood pressure without side effects in a majority of patients.

Like *V. viride*, which contains the alkaloid protoveratrine, *V. album* also yields protoveratrine alkaloids. The mixture of protoveratrines A and B from *V. album*, in therapeutic doses, induces vasodilation in the cardiovascular system by influencing the buffer-reflex receptors. Protoveratrine B has about 80 per cent of the potency of A. Orally administered for the management of moderate hypertension in initial dosage of 0.5 mg. after each meal and at bedtime, the dosage is gradually increased under the constant supervision of the physician. With this drug also there is the possibility of nausea and vomiting occurring before establishment of the maintenance dose. These reactions indicate the approach to overdosage and are usually controlled by reduction of the last dose of protoveratrines A and B by 0.1 or 0.2 mg.

The advent of *Rauwolfia serpentina* into occidental *materia medcia* has been enthusiastically welcomed by physicians and their hypertensive patients. *Rauwolfia serpentina*, native to the Himalayan hills of India and used in that country for centuries for insomnia, hypochondria and insanity, and since 1933 as a sedative and hypotensive agent (6), was introduced clinically in the United States in 1952 (7) in the form of the powdered drug.

Among the alkaloids isolated from *R. serpentina* are serpentine, serpentinine, ajmaline, ajmalinine, reserpine, sarpogenine, and most recently rescinnamine. It was believed that reserpine was the most potent alkaloid in *R. serpentina* and that it accounted for much of the activity of the root. Reserpine is an ester-alkaloid like the hypotensive Veratrum alkaloids. Degradation studies indicate that reserpine contains the pentacyclic nucleus which is present in the alkaloid yohimbine. Klohs, *et al.* have shown that rescinnamine, which they isolated from a fraction of the *R. serpentina* alkaloids, is the 3,4,5-trimethoxycinnamic acid ester of methyl reserpate (8).

Action of Rauwolfia

The principal pharmacologic responses of *Rauwolfia serpentina* are hypotension, bradycardia (slow heartbeat), and sedation. In contrast to most other known agents producing these effects, Rauwolfia in clinical doses exhibits a latent period of several days before these changes become apparent. It is therefore necessary to make a distinction between the immediate effects of very large doses of the drug and the results from clinical doses after the latent period. Rescinnamine exhibits qualitative hypotensive, bradycrotic (pulse slowing), and sedative activity similar to that of reserpine, but the former appears to be more hypotensive and less sedative (9).

Selective List of Drugs Use

Trade Name	Generic or Other Name	Pharmacologic Action	Dosage Forms
Ansolysen (Wyeth)	Pentolinium Tartrate	GB	*Parenteral:* 10-cc. vials, 10 mg./cc. *Tablets:* 40- and 100-mg.
Apresoline HCl (Ciba)	Hydralazine HCl N.N.R.	C	*Ampuls:* 1-cc., 20 mg./cc. *Tablets:* 10-, 25-, 50-, and 100-mg.
Arfonad Camphorsulfonate (Roche)	Trimethaphan Camphorsulfonate N.N.R.	GB	*Ampuls (Intravenous):* 10-cc., 50 mg./cc.
Arterocyn (Flint)	Potassium Thiocyanate N.F.	U	*Elixir:* 4.4 Gm./100 cc.
Benodaine HCl (Sharp & Dohme)	Piperoxan HCl N.N.R.	AB, D	*Ampuls:* 10-cc., 2 mg./cc.
Bistrium Bromide (Squibb)	Hexamethonium Bromide N.N.R.	GB	*Parenteral:* 10-cc. vials, 33.8 mg./cc.
Bistrium Chloride (Squibb)	Hexamethonium Chloride N.N.R.	GB	*Parenteral:* 10-cc. vials, 135.2 mg./cc. *Tablets:* 125- and 250-mg.
Crystoserpine (Smith-Dorsey)	Reserpine (Cryst.) N.N.R.	U	*Tablets:* 0.25-mg.
Dibenzyline (S.K.F.)	Phenoxybenzamine HCl	AB	*Capsules (Oral):* 10-mg.
Erythrol Tetranitrate (Merck)	Erythrityl Tetranitrate U.S.P.	SMR	*Tablets:* 15- and 30-mg.
Esomid Chloride (Ciba)	Hexamethonium Chloride N.N.R.	GB	*Syrup:* 473-cc. bottles, 62.5 mg./cc *Tablets:* 250-mg.
Etamon Chloride (Parke-Davis)	Tetraethylammonium Chloride N.N.R.	GB	*Parenteral:* 20-cc. Steri-vials, 100 mg./cc
Haimased (Tilden)	Sodium Thiocyanate N.F.	U	*Solution (Oral):* 4.4 Gm./100 cc.
Hexameton Chloride (Burroughs Wellcome)	Hexamethonium Chloride N.N.R.	GB	*Parenteral:* 10-cc. vials, 33.8 mg./cc. *Tablets:* 250- and 500-mg.
Hydergine (Sandoz)	Hydrogenated ergot alkaloids	C, P	*Tablets (Sublingual):* 0.167 mg. each of the dihydro forms of ergocornine, ergocristine, and ergokryptine as methanesulfonates. *Ampuls:* 1-cc., 0.1 mg. of each alkaloid/cc.
Koglucoid (Panray)	*Rauwolfia serpentina* root	U	*Tablets:* 50- and 250-mg.
Maxitate (Strasenburgh)	Mannitol Hexanitrate U.S.P.	SMR	*Tablets:* 30-mg.
Maxitate with Rauwolfia Compound (Strasenburgh)	None	U	*Tablets:* 30 mg. mannitol hexanitrate + 30 mg. Rauwolfia (root) + 30 mg. rutin
Methium Chloride (Warner-Chilcott)	Hexamethonium Chloride N.N.R.	GB	*Tablets:* 125-, 250-, and 500-mg.
Methium with Reserpine (Warner-Chilcott)	Hexamethonium Chloride with Reserpine	GB, U	*Tablets:* 125 or 250 mg. hexamethonium chloride with 0.125 mg. reserpine
Nitranitol (Merrell)	Mannitol Hexanitrate N.N.R.	SMR	Tablets 32-mg. 32-mg. + 16 mg. phenobarbital 32-mg. + 16 mg. phenobarbital + 20 mg. rutin 32-mg. + 16 mg. phenobarbital + 100 mg. theophylline
Nitranitol P.V. (Merrell)	None	SMR, C	*Tablets:* 32 mg. mannitol hexanitrate + 16 mg. phenobarbital + 1 mg. alkavervir

Hypertension Treatment

Trade Name	Generic or Other Name	Pharmacologic Action	Dosage Forms
Nitranitol R.S. (Merrell)	None	SMR, U	*Tablets:* 32 mg. mannitol hexanitrate + 0.5 mg. alseroxylon fraction *R. serpentina* alkaloids
Nitroglyn (Key)	Nitroglycerin U.S.P.	SMR	*Tablets* (*Sustained Action*): $^1/_{25}$- and $^1/_{10}$-gr.
Octrite Inhaler (H.W. & D.)	Octyl Nitrite	SMR	Inhaler containing 2 cc. of octyl nitrite
Pentoxylon (Riker)	None	U	*Tablets:* 1 mg. Rauwiloid (see) and 10 mg. pentaerythritol tetranitrate
Peritrate Tetranitrate (Warner-Chilcott)	Pentaerythritol Tetranitrate N.N.R.	SMR	*Powder:* Mixture containing 45.5 mg. pentaerythritol tetranitrate/Gm. *Tablets:* 10- and 20-mg., and 10-mg enteric coated tablets
Pertenal Tablets (Crookes)	None	U	*Tablets:* 100 mg. *V. viride* (ext.), 15 mg. phenobarbital, 30 mg. mannitol hexanitrate, 2.5 mg. homatropine methylbromide
Potassium Thiocyanate, Enseals (Lilly)	Potassium Thiocyanate N.F.	U	*Enseals:* 65- and 200-mg.
Priscoline HCl (Ciba)	Tolazoline HCl N.N.R.	AB	*Tablets:* 25-mg. *Elixir:* 25 mg./4 cc. *Vials:* 10-cc., 25 mg./cc.
Provell Maleate (Lilly)	Protoveratrines A and B Maleates N.N.R.	C	*Tablets* (*Diskets*): 0.2- and 0.5-mg.
Raudixin (Squibb)	*Rauwolfia serpentina* root	U	*Tablets:* 50- and 100-mg.
Raufia Tablets (P. Maney)	None	U	*Tablets:* 0.75 mg. *R. serpentina* alkaloids, 100 mg. *V. viride*, 30 mg. mannitol hexanitrate, 20 mg. rutin
Raupena (Crookes)	*Rauwolfia serpentina* root	U	*Tablets:* 50-mg.
Rau-Sed (Squibb)	Reserpine N.N.R.	U	*Tablets:* 0.1-, 0.25-, 0.5-mg., and 1 mg.
Rau-Tab (National)	None	U	*Tablets:* 2 mg. alseroxylon alkaloid fraction of *R. serpentina*
Rautensin (Smith-Dorsey)	None	U	*Tablets:* 2 mg. alseroxylon fraction of R. *serpentina* alkaloids
Rauval (Vale)	*Rauwolfia serpentina* root	U	*Tablets:* 50- and 100-mg.
Rauvera (Smith-Dorsey)	None	U, C	*Tablets:* 1 mg. alseroxylon fraction of *R. serpentina* and 3 mg. alkavervir
Rau-Vertin (National)	None	U, C	*Tablets:* 1 mg. alseroxylon fraction of *R. serpentina* and 3 mg. alkavervir
Rauwidrine (Riker)	None	U	*Tablets:* 1 mg. Rauwiloid (see) and 5 mg. amphetamine sulfate
Rauwiloid (Riker)	None	U	*Tablets:* 2 mg. alseroxylon fraction of *R. serpentina* alkaloids
Rauwiloid + Hexamethonium Tablets (Riker)	None	U, GB	*Tablets:* 1 mg. Rauwiloid (see) and 250 mg. hexamethonium chloride dihydrate
Rauwiloid + Veriloid Tablets (Riker)	None	U, C	*Tablets:* 1 mg. Rauwiloid (see) and 3 mg. alkavervir
Rauwistan Tablets (M. R. Thompson)	*Rauwolfia serpentina*	U	*Tablets:* 100-mg.
Regitine HCl and Methanesulfonate (Ciba)	Phentolamine HCl and Methanesulfonate N.N.R.	AB	*Tablets:* 50 mg. phentolamine HCl. *Ampuls:* 5-mg., 5 mg. phentolamine methanesulfonate, with 1-cc. vial water for injection
Reserpoid (Upjohn)	Reserpine N.N.R.	U	*Tablets:* 0.1- and 0.25-mg.
Sandril (Lilly)	Reserpine N.N.R.	U	*Tablets* (*Diskets*): 0.25-mg.
Sandril c Pyronil (Lilly)	None	U	*Tablets:* 0.25 mg. reserpine and 7.5 mg. pyrrobutamine
Serfin (Parke-Davis)	Reserpine N.N.R.	U	*Tablets:* 0.25-mg.
Serpanray (Panray)	Reserpine N.N.R.	U	*Tablets:* 0.1- and 0.25-mg.

Trade Name	Generic or Other Name	Pharmacologic Action	Dosage Forms
Serpasil (Ciba)	Reserpine N.N.R.	U	*Tablets:* 0.1-, 0.25- and 1.0-mg. *Solution (Parenteral):* 2-cc. ampuls, 2.5 mg./cc. *Elixir:* 0.2 mg./4 cc.
Serpasil-Apresoline HCl (Ciba)	None	U, C	*Tablets:* 0.2 mg. reserpine and 50 mg. hydralazine HCl
Serpiloid (Riker)	Reserpine N.N.R.	U	*Tablets:* 0.25-mg.
Serpine Tablets (Pitman Moore)	Reserpine N.N.R.	U	*Tablets:* 0.3-mg.
Thia-Mannitol with Phenobarbital (Walker)	None	U	*Capsules:* 30 mg. mannitol hexanitrate + 15 mg. phenobarbital + 3 mg. thiamin
Tolanate Tablets (Com. Solv. Corp.)	Inositol Hexanitrate	SMR	*Tablets:* 10-mg. 10 mg. + 16 mg. phenobarbital
Turased (Patch)	None	U	*Tablets:* 16.2 mg. pentobarbital sodium, 48.7 mg. potassium thiocyanate, 32.5 mg. sodium nitrite, 10 mg. rutin
Unitensen Acetate (Irwin, Neisler)	Cryptenamine Acetate N.N.R.	C	*Solution (Parenteral):* 5-cc. vials, 2 mg. cryptenamine/cc.
Unitensen Tannate (Irwin, Neisler)	Cryptenamine Tannate N.N.R.	C	*Tablets:* 2-mg.
Veralba (Pitman Moore)	Protoveratrines A and B N.N.R.	C	*Tablets:* 0.2- and 0.5-mg. *Injection:* 10-cc. vials, 0.2 mg. protoveratrines A and B/cc.
Veralba-R (Pitman Moore)	None	C, U	*Tablets:* 0.4 mg. protoveratrines A and B and 0.08 mg. reserpine
Verapene (Wampole)	None	U, C	*Tablets:* 0.1 mg. reserpine + 0.4 mg. protoveratrines A and B
Verastan (M. R. Thompson)	None	C	*Solution (Oral):* 100 mg. of total activity of *V. viride*/5 cc. *Tablets:* 100-mg.
Veratrone (Parke-Davis)	None	C	*Solution (Oral):* 2.5 mg. *V. viride* alkaloids/cc.
Verenteral (Irwin, Neisler)	None	C	*Solution (Intravenous):* 100 C.S.R. Units *V. viride*/cc.
Vergitryl (Squibb)	None	C	*Solution (Intramuscular):* 10-cc. vials 1.5 Squibb Units *V. viride* alkaloids/cc. w/procaine HCl 1%. *Solution (Intravenous):* 5-cc. ampuls, 0.1 Squibb Unit *V. viride* alkaloids/cc. *Tablets:* 1 Squibb Unit *V. viride* alkaloids
Veriloid (Riker)	Alkavervir N.N.R.	C	*Tablets:* 1-, 2-, and 3-mg. *V. viride* alkaloids. *Solution (Intravenous):* 5-cc. ampuls, 0.4 mg. alkavervir/cc. *Solution (Intramuscular):* 2-cc. ampuls, 1 mg. alkavervir/cc. w/procaine HCl 1%
Veriloid-VP (Riker)	None	C	*Tablets:* 2 mg. alkavervir and 15 mg. phenobarbital
Veriloid-VPM (Riker)	None	C	*Tablets:* 2 mg. alkavervir, 15 mg. phenobarbital, and 10 mg. mannitol hexanitrate
Vertavis (Irwin, Neisler)	None	C	*Tablets:* 5 and 10 Craw Units *V. viride*
Vertavis-Phen (Irwin, Neisler)	None	C	*Tablets:* 10 Craw Units *V. viride* w/15 mg. phenobarbital
Wolfina Tablets (Lloyd & Dabney)	*Rauwolfia serpentina* root	U	*Tablets:* 50- and 100-mg.
Wyamine Sulfate (Wyeth)	Mephentermine Sulfate	Pr	*Injection:* 1- and 10-cc. vials, and 2-cc. ampuls, containing equiv. of 15 mg. of base/cc. *Elixir:* 25 mg. sulfate/5 cc. *Tablets:* 25-mg. sulfate

AB—Adrenergic blocking agent; C—Central action; D—Diagnostic agent; GB—Ganglionic blocking agent; P—Peripheral; Pr—Pressor; SMR—Smooth muscle relaxant; U—Uncertain.

Wilkins (10) notes that the mildest of the blood-pressure-lowering drugs is *Rauwolfia serpentina* and its derivatives, all of which are very similar in action, whether they be the whole root (Raudixin), the alseroxylon fraction (Rauwiloid) or the alkaloid reserpine. Wilkins states: "Rauwolfia acts on the midbrain as a sedative or relaxing drug. It slows the heart and lowers the peripheral resistance and blood pressure moderately. Since there is no evidence that it causes tolerance or addiction, it can apparently be taken indefinitely, which is a distinct advantage in a disease as chronic as essential hypertension. The common side effects of Rauwolfia are drowsiness, nasal stuffiness, increased motility of the bowel and, in excessive doses, disturbed sleep and mental depression. As a rule, none of these is unbearable and all may be relieved by interrupting or reducing the dosage."

Therapeutic Uses

The relative activities of the dosage forms are indicated by the usual starting doses: 100 mg. of the powdered whole root; 2 mg. of the alseroxylon (alkaloid) fraction, and 0.1 mg. of reserpine.

Wilkins (10) reports that "Rauwolfia and its derivatives are quite useful alone especially in the milder, labile, neurotic hypertensive patient with tachycardia, not only in lowering the blood pressure and slowing the pulse rate, but also in relieving symptoms, particularly anxiety, irritability, headache, palpitation, and dizziness. Their best use, however, is as background or adjunct agents when the more powerful drugs must be employed. They lessen the reactivity of the patient, decreasing his objections to the side effects of the other drugs, and in addition, by their own positive actions, they offset some of the side effects of the other drugs. Thus, by stimulating the bowel, they lessen the obstipation of hexamethonium; by slowing the pulse, they lessen the palpitation of hydralazine, and by their nausea-allaying effects they moderate the emetic action of veratrum."

Adrenergic Blocking Agents

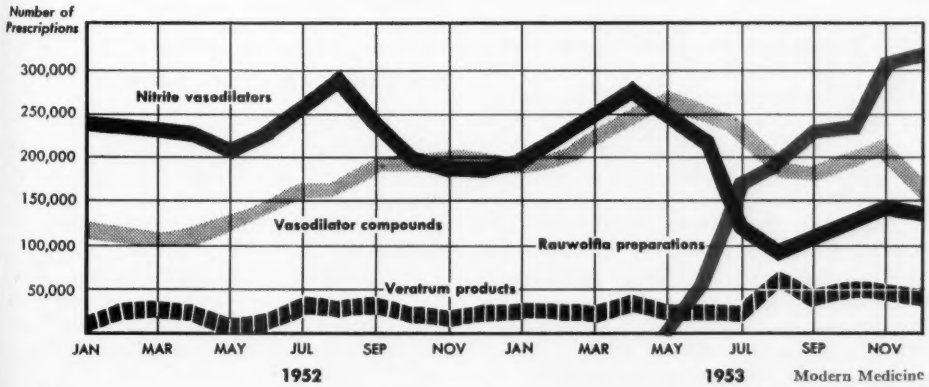
The adrenaline antagonizing action of certain compounds has been known for some time. They inhibit the effects of circulating adrenaline and also the pressor substances liberated at the sympathetic nerve endings and causing vasodilation. Some of these compounds are phentolamine (Regitine) hydrochloride, piperoxan (Benodaine) hydrochloride, Dibenamine hydrochloride, and tolazoline (Priscoline) hydrochloride. The main use of these drugs in this field, with the exception of tolazoline which is not specific enough, is for the diagnosis of hypertension due to the presence of a relatively rare tumor called pheochromocytoma.

Guiding Principles

Regarding the use of the combination of Rauwolfia, Veratrum, hydralazine, and hexamethonium in the treatment of hypertension, Wilkens (10) gives the following guiding principles:

1—Suit the treatment to the patient.
2—Try the milder drugs first, particularly in the milder cases.
3—Add other drugs as necessary.
4—After the pressure comes down try reducing or eliminating doses, especially of the stronger drugs.

Distribution Estimate



Discussing "Recent Developments in the Treatment of Hypertension" (11), Edward D. Freis states: "The 'three R's' in the treatment of mild hypertension are reassurance, relaxation, and Rauwolfia." In the treatment of moderate hypertension, he begins with Rauwolfia; then, if two weeks of therapy prove unsuccessful, Veratrum in one-tablet dose is added; and if the Veratrum-Rauwolfia combination is unsuccessful he adds Apresoline in gradually increasing dosages beginning with 10 mg. three or four times daily. For the treatment of severe hypertension, Freis and his associates developed combinations of M & B 2050 (pentapyrrolidinium, pentolinium, Ansolysen), Apresoline, Serpasil, and Prostigmin. The Prostigmin is added to prevent impairment of intestinal motility due to accumulation in the gastrointestinal tract of an orally ingested ganglionic blocking agent (pentolinium bitartrate). Freis called the combination of drugs "Hypotensen," with each capsule containing the following amounts for strengths A, B, and C:

	Hypotensen		
	A	**B**	**C**
Pentolinium	25.0 mg. of ion (60 mg. of bitartrate)	45.0 mg.	80.0 mg.
Apresoline	20.0	50.0	90.0
Serpasil	0.2	0.2	0.2
Prostigmin	15.0	15.0	15.0

(Amounts to make the desired number of capsules were pulverized in a Waring blendor; the resulting powder was thoroughly mixed and encapsulated.)

The patient was given one capsule of Hypotensen A every eight hours. If after three days to a week there was no appreciable lowering of blood pressure either in the supine or erect positions, the patient was given Hypotensen B; and if this was unsuccessful he was given Hypotensen C. The tablets were scored so that half doses could be used in going from one strength to another where the patient reaction was more violent than desired.

This is but one regimen. There are other planned therapeutic procedures. Still, the ideal drug for the treatment of hypertension and its associated conditions has not been found. But many hypertensive individuals today are leading normal lives with the aid of the drugs now included in the physician's armamentarium.

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Cortisone Promising in Tropical Ills

Cortisone has shown promise in treatment of certain parasite-caused tropical diseases.

So reports Dr. Edward K. Markell of the infectious diseases department of the University of California Medical School at Los Angeles.

Dr. Markell recently completed an investigation of the use of cortisone in treatment of elephantiasis in Tahiti. Cortisone was administered in 100- or 200-mg. daily dosage for five days and continued at 100 mg. daily for about a month. It was found that cortisone eliminated or helped reduce the swelling in almost all patients. In general some relapse occurred after cessation of therapy but the clinical improvement persisted for months.

Dr. Markell will study the use of cortisone against onchocerciasis, a tropical disease borne by the black gnat. The disease results in formation of nodules over the body and inflammation of eye tissue frequently leading to blindness. It is particularly prevalent in Mexico and Central America among coffee plantation workers.

Isoniazid for Multiple Sclerosis

Veterans Administration has announced that it plans to conduct further studies of an inadvertent discovery that isoniazid used in the treatment of tuberculosis also may be of value in the treatment of multiple sclerosis, for which no cure presently is known.

As a result of an observation in the Bronx N. Y., VA hospital, isoniazid has been tried with what appears to be promising results on 30 of the hospital's patients suffering from multiple sclerosis.

Status of 796 Medical Specialties

By Hillory W. Still and C. Lee Huyck

With increasing use of medical specialties, concern mounts over an assumed decline in the use of official drugs In this study, Hillory W. Still, chief pharmacist, Firmin Desloge Hospital, St. Louis, Mo., and C. Lee Huyck, professor of industrial pharmacy, St. Louis (Mo.) College of Pharmacy and Allied Sciences, chart the occurrence of official drugs in 796 medical specialties.

THE GROWING popularity of medical specialty items does not mean decreased use of official drugs. Far from it. The fact is: a study of specialties shows use of official drugs to be greater today than any time in recent memory. One of the reasons for this is most of the specialties are official drugs, combinations of official drugs or combinations of drugs official and unofficial.

What are medical specialties? For this study, we classed them as a pharmaceutical preparation manufactured and marketed under a registered trademark and prescribed by the physician. Along the same line, we labeled official drugs those to be found in U. S. P. XIV and N. F. IX.

A total of 796 specialties were tabulated after checking more than 5,000 prescriptions, written and filled at exclusively prescription shops from January through June, 1952, in Birmingham, Ala.

These specialty-item prescriptions contained 2,105 active ingredients. Of these, 1,341 or 63.7 per cent were official in U. S. P., while 177 or 8.4 per cent were official in N. F. In fact, 72.1 per cent of the active ingredients in specialties considered were official.

Nine of these 10 most prescribed items contained only one active ingredient, and in five cases that ingredient was official. Of the active ingredients here, 61.5 per cent were official.

Table I.—Most Frequently Prescribed Dosage Forms

Dosage Forms	Occurrence per 1000 Prescriptions
Tablets	377.02
Elixirs	96.03
Solutions (exclusive of ophthalmic solutions, parenterals, and syrups)	55.17
Ointments, creams, and jellies	44.48
Emulsions and suspensions	43.29
Syrups	21.25
Lozenges, wafers, buccal tablets, and linguets	20.28
Suppositories	13.45
Powders and granules	12.04
Ophthalmic solutions	11.40
Parenterals	10.60

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Table II.—Ten Most Frequently Prescribed Medical Specialties

Medical Specialty	Manufacturer	Ingredients U.S.P.	Ingredients N.F.	Ingredients Total	Occurrence per 1000 Prescriptions
Chloromycetin Kapseals	Parke, Davis	1	0	1	45.5
Neo-Synepherine solution	Winthrop Stearns	1	0	1	28.4
Pyribenzamine tablets	Ciba	1	0	1	25.4
Donnatal tablets	Robins	3	0	4	20.2
Aureomycin capsules	Lederle	1	0	1	19.3
Seconal Pulvules	Lilly	0	0	1	17.4
Nembutal capsules	Abbott	1	0	1	16.7
Gantrisin tablets	Roche	0	0	1	15.7
Propadrine capsules	Sharp and Dohme	0	0	1	15.0
Premarin tablets	Ayerst, McKenna and Harrison	0	0	1	14.0

Principles of Artificial Infant Feeding

By L. S. Baur

Malnutrition mortality among infants denied breast milk stood at 54 per cent in 1863. Today such deaths are almost nonexistent. That's because of increased clinical experience, improved bacterial quality, reduction of curd, and the fact that most makers of infant feeding preparations have come to use breast milk as a guide, says Dr. Baur, clinical research advisor at M & R Laboratories. Here he lists problems in modifying cow's milk to meet the essential requirements.

SIXTEENTH CENTURY MOTHERS received this sage advice on feeding their infants from Scevola de Sante-Marthe:

If health and strength permit thee, don't refuse
The child thy nipple; nor another's use—
Yet if thou'rt sickly, if thy spirits fail
If the child's touched with any catching ail
This duty, whether hated or desired,
Ceases and is no more of thee required.

Whatever the state of mothers' spirits today, it is estimated that in most urban areas not over 25 per cent of babies two months of age are breast-fed. The obvious need for good artificial feeding for infants presents a serious challenge to nutritionists and clinicians.

And this challenge has been met with serious investigation. Clinical evidence shows that an artificially fed baby today has the same chance of survival as his breast-fed counterpart. His general well-being and development and resistance to infection are almost indistinguishable from those of the baby nursed at his mother's breast (1). In recent years the preparation of artificial feeding has become more and more simplified. All that is now needed to prepare a day's feeding is water and one or more food materials. These materials are economical and readily available to almost every family.

Nutritional Requirements

All foods, whether for infants or adults, should supply fat, carbohydrate, and protein as well as vitamins and minerals. Babies' needs for these food elements are basically the same as those of all humans; yet it is evident that there are differences in amount, in proportions, and in quality which are peculiar to infants. These divergences are discussed below.

Authorities generally agree that human breast milk is the ideal food for infants, and most manufacturers are guided by it to some degree. Cow's milk is the most readily available and easily processed source of basic raw material. The major problems in modifying cow's milk to meet the breast milk standard involve: 1—Fat adjustment, 2—Carbohydrate supplementation, 3—Protein modification, 4—Vitamin addition, 5—Mineral adjustment, and 6—Ease of preparation under sterile conditions.

Fats

It has not been established that man has an absolute need for fat but its many useful functions make its inclusion in the diet desirable. There are so-called essential fatty acids, reputed to help maintain a normal skin. Fat serves as an ideal medium for the transport of fat-soluble vitamins. It is an efficient source of energy, since one gram yields nine calories, in contrast to four from either protein or carbohydrate, and dietary fat can spare protein for tissue anabolism. Other uses of fat have not yet been as clearly defined, but the evidence for further metabolic benefits is being accumulated (2).

The factors involved in fat absorption by infants have received extensive clinical study. Although most term infants can absorb and digest fat as well as adults, there are advantages to providing fat mixtures comparable to breast milk fat in quantity and composition. Breast milk fat

is readily assimilable because of the high proportion of oleic and other unsaturated fatty acids (3). The small globule size is also considered to aid assimilation (4). Table I shows the comparative retention of some fats tested in infants' diets. Greater similarity to breast milk has been attained in some proprietary infant foods through the substitution of carefully chosen mixtures of vegetable oils and animal fats for all or part of the butter fat.

Premature infants have some difficulty in assimilating fat, and their fecal fat loss is greater. Even the smallest premature, however, retains 65 per cent of the fat fed (5). The higher caloric yield of fat still provides more energy than would fat replacement by either protein or carbohydrate.

Table I—Fat Composition and Retention

FAT FED	PER CENT RETENTION
Olein	97.5
Olive oil	95.1
Soybean oil	93.7
Human body fat	93.4
Breast milk fat	92.4
Goat's milk fat	92.7
Corn oil—butter mixture (1:1)	90.6
Butter fat	88.9
Cocoanut oil	88.7
Palmitin-stearin (2:1)	61.5

Adapted from Holt, L. E. Jr., Tidwell, H. C. Kirk, C. M., Cross, D. M., and Neale, S., *J. Pediat.*, 6, 427(1935)

Carbohydrates

Neither the normal term nor premature infant has difficulty absorbing or utilizing sugars. No deficiency state due to lack of sugar in the diet has ever been observed, although prolonged feeding of a carbohydrate-free diet is impractical. Its role as a ready source of energy, with sparing effect on protein, is well known. Recent studies have shown that the formula with a carbohydrate content lower than that of breast milk presents a higher renal solute load, leading in some stress situations to dehydration (6). Excessive intake, on the other hand, leads to excessive fermentation and diarrhea and disturbances in water and electrolyte balance (7). Carbohydrate is by weight the largest fraction in breast milk, constituting slightly over half the total solids.

In artificial infant feeding it is common practice to add carbohydrate to a cow's milk base in the preparation of the formula. The level used varies but centers around an amount sufficient to raise the total caloric contribution of sugar to 45 per cent. The nature of the carbohydrate varies, too, with lactose (the sugar of milk), sucrose, and dextrin-maltose preparations all enjoying use.

Proteins

The word protein is derived from the Greek word meaning primary, and protein certainly holds first place in nutrition. It forms the basis of all living tissue and can be supplied to the animal organism either in original conjugated form or as mixtures of the individual building blocks, the amino acids.

Cow's milk provides two major proteins, casein and lactalbumin. This complex supplies food for the calf, with his four stomachs, but not for the human infant. The large, tough curd formed by action of the gastric juices hampers digestion of cow's milk protein by babies. The curd of breast milk, on the other hand, is fine, flocculent, and near-liquid. Alteration of cow's milk protein for human infant consumption can be accomplished through heat treatment, chemical modification, or a combination of both. The last results in a curd most closely approximating that of breast milk.

Recognition of the importance of protein has led to much experimentation directed toward arriving at an optimal level for artificial infant feeding. Meyer points out that adequate growth can be insured on as little protein as 1.5 grams per kilogram of body weight per day (8). There is general agreement that the appropriate provision of protein for the newborn infant is the amount available in human milk. The mean value of breast milk protein has been determined to be 1.5 per cent, with a range of ± 0.5, providing the average, well-nourished infant 2.5 grams of protein per kilogram of body weight per day.

During the 1930's many authorities advocated higher levels of protein. Their recommendations were based on interpretation of findings by Osborne and Mendel in their work with rats (9), and those of Gordon and co-workers with premature infants (10). Extrapolation of these data led to high protein formula prescription for term infants, to provide a higher lactalbumin intake than is available in cow's milk. Later work with humans demonstrated, however, that the findings of Osborne and Mendel were applicable only to fur-bearing animals (11). Although the proportions of casein and lactalbumin vary in the milks of different species, there is some similarity of amino acid content of a typical infant feeding to that of breast milk. Appropriate amino acid content (12) and its availability are the important factors in protein utilization.

As new data have come to light it has become more apparent that the breast milk quantum of protein is the appropriate level for artificial feeding. With reference to practical application of recent findings to infant feeding Levine has reported to the A.M.A. Council on Foods and Nutrition, "... in equivalent content of protein (digestible form) above maintenance levels the two milks (human and cow) are equally nutritious" (13), and Jeans' last recommendation before his untimely death states, "the standard for cow's milk protein is considered as 2.5 grams to 3 grams per kilogram" (14).

Addis has demonstrated that rats on high casein diet showed weight gain largely in hypertrophied kidney and liver (15), and Talbot showed in a 17-Kg. infant that the increase in nitrogen balance on a high protein diet was temporary, returning to previous level within 10 days (16). Calcagno and Rubin have deduced that the renal solute load of a high protein diet may be an important factor in compromising the infant's electrolyte and water balance (17), concurring in conclusions reached by Pratt and Snyderman (18), and Barnett and Vesterdal (19). The practical significance of this potential hazard has been pointed up in a study by Darrow and associates (6). Ordinary summer heat (90°–93° F.), they found, might create sufficient stress to result in dehydration of infants fed high protein formulas.

Vitamins

All infants need vitamins, but the problem of defining their requirements is extremely complex. Among normal subjects there are differences due to varying constitutional patterns. The nature of the intestinal flora derived from the infant's environment and its ability to synthesize various accessory food factors must be reckoned with. Treatment of the food prior to ingestion certainly enters the picture.

The vitamin content of the natural food for infants is known to supply all requirements and, generally, in artificial feeding the attempt is made to provide breast milk levels. Vitamin D is the single exception since, although there is practically no D in breast milk, breast-fed infants do not normally show signs of rickets.

The fat-soluble vitamins have received some rather recent attention in infant feeding. Breast milk averages 2,500 units of vitamin A per quart, and this level is standard in artificial feeding. Whether vitamin D is supplied as fish liver oil concentrate, activated 7-dehydro-cholesterol or irradiated ergosterol seems to be immaterial for the infant. There is general agreement that a daily intake of 400 U.S.P. units offers full protection. A number of recent reports have dealt with hypervitaminosis A and hypervitaminosis D, indicating that oversupplementation by zealous mothers may be more prevalent than deficiency states.

Vitamin K activity is associated with the synthesis of prothrombin and is frequently given to the mother immediately before delivery or to the infant directly postpartum to prevent hemorrhagic conditions. It has not been demonstrated that vitamin K supplementation is beneficial in artificial feeding. Although the essentiality of vitamin E, or alpha-tocopherol, has not been established for man, it has been shown that the serum level of the breast-fed infant rises rapidly to that of the adult—interpreted by some as indicating an early need for the compound. Recent investigation has brought forth postulation of two areas of vitamin E influence: erythrocyte fragility and retrolental fibroplasia, the dread eye disease of prematurity. Further investigation is necessary to elucidate the role of vitamin E in infant nutrition.

Among the water-soluble vitamins, thiamine, riboflavin, niacin, B_6, ascorbic acid, folic acid, and B_{12} are the most significant. The first three are present in most infant foods, either naturally occurring or as additives, in amounts sufficient to prevent deficiency states. In a study by Snyderman *et al.* (20), and in the investigation of a number of recent cases of convulsive seizure (21), the importance of vitamin B_6 in infant nutrition has been demonstrated. It has been concluded that the breast milk level (100–130 mcg. per liter) is optimal (21, 22). Formulas based on cow's milk have been shown to supply adequate levels of folic acid and B_{12}. Other members of the B group have not been so extensively studied for their effect on the infant, and their supplementation is not recommended.

Considerable new data on the functions of ascorbic acid have come to light within recent years. Vitamin C was taken more or less for granted in infant nutrition until a decade ago. Since then its value in metabolic activity other than prevention of scurvy has been recognized. We know now that ascorbic acid is essential to the metabolism of tyrosine and phenylalanine (23), the prevention of megaloblastic anemia (24), the conversion of folic acid to its active form, citrovorum factor (25), and a host of other reactions. Breast milk from well-fed mothers supplies about 50 mg. per quart. Jeans has cautioned that the artificially fed infant frequently receives too little vitamin C, too late (26). Zuelzer and Rutzky state that where vitamin C is

added to the formula, the infant benefits by the constant presentation, whereas the day's supply in single dosage is less efficiently utilized (27). Most of the C in cow's milk is lost in processing, and several proprietary infant foods are supplemented to provide 50 mg. per quart.

Minerals

Minerals play such a wide role in infant nutrition that it is virtually impossible to list all their uses. They enter into skeletal structure and electrolytic and osmotic balances, are components of hormones, vitamins, and enzymes. The baby's body has proportionately almost twice the mineral content of the adult's and yet he needs a large exogenous supply because of his rapidly developing structure. Breast milk meets these requirements and so do the well-constructed artificial formulas. Cow's milk is considerably higher in mineral content than breast milk, but evidence is accumulating to show that the proportions of mineral elements in cow's milk do not coincide with the infant's multiple but specific needs.

Calcium and phosphorus are fundamental in good mineral nutrition. About 98 per cent of the calcium in the body is found in bony tissue. The remainder is in the extracellular fluid where it plays a part in the electrolyte pool, influencing nerve impulse transmission, blood clotting, and certain hormone and enzyme system reactions. Phosphorus has similar important functions in the body. In addition, it occupies a unique position in energy transfer, particularly in carbohydrate metabolism.

The amount of calcium intake required by the infant is influenced to a great extent by the ratio of calcium to phosphorus in the formula. A quart of breast milk contains about 0.33 Gm. of calcium and 0.15 Gm. of phosphorus (28). Cow's milk contains much more of both elements, especially phosphorus. This unphysiologic ratio may produce serum hyperphosphatemia in the newborn human and, in the presence of parathyroid or renal deficiency, associated neuromuscular disturbances (29, 30). In the preparation of formulas for artificial feeding the incidence of these disturbances may be minimized by adjustment of the calcium:phosphorus ratio upward toward that of breast milk. This is, of course, not feasible in "kitchen preparation," but there are available some prepared feedings in which adjustment has been made. Sodium, potassium and chlorine are also critical elements for the maintenance of normal osmotic and acid-base balance in the intra- and extracellular fluids.

An excessive quantity of these electrolytes may tax the renal capacity of the infant, with his limited urine-concentrating ability. This happens most frequently with unphysiologically high protein formulas, which present a high load of both urea and electrolytes for renal excretion (6).

Normal infants on breast milk or on cow's milk formulas receive enough iron during the early months of life to supplement adequately the stores built up *in utero*. By the age of six months, or earlier, there is need for additional supply, met by the inclusion of natural iron-containing foods in the diet. Iron supplements are frequently prescribed for premature infants and those of multiple births (31). Strict control is necessary, however, since there is evidence that indiscriminate ingestion of iron may result in toxicity (32).

The minor and trace elements are as necessary for infants as for adults. These include copper, magnesium, sulfur, zinc, iodine, cobalt, fluorine, manganese, and molybdenum. Fortunately, all of these are present in what appear to be physiologic amounts in both human and cow's milk formulas and supplementation is not required.

Formula Preparation

Standard formulas for normal infants are generally prepared to furnish 20 calories per fluid-ounce, as in breast milk. Such a concentration provides the infant, who takes in approximately 50 calories per pound of body weight per day, the $2^1/_2$ ounces of water per pound per day he needs.

Preparation of the infant formula presents no real problems to the parents or nurse. Modern technology has made most of the powdered milk products readily soluble. In using one of these it can be considered a safe rule to float the powder on the prescribed quantity of water. Solution is effected by stirring briefly. The condensed liquid preparations usually need only dilution with water. Should other materials such as carbohydrate be required, they can be added to the water prior to adding milk.

As indicated, formulas based on breast milk composition and derived through modification of cow's milk are the feeding of choice for the artificially fed infant. Special feeding preparations include those based on hydrolyzed casein, goat's milk, soybean protein, meat protein, and lactic acid milk In those rare instances where a sensitivity to cow's milk is considered to exist these may offer some advantage.

Most infant foods on the market are of excellent bacterial quality, and formulas prepared from them using aseptic technique are usually entirely satisfactory without further treatment. During

recent years the practice of terminal sterilization has gained favor, but additional time and study are needed to permit conclusive evaluation of this technique.

Summary

Although infants will get along on an amazing variety of foods, the optimal nutritional requirements fall within rather well-defined areas. Only rarely are artificial feeding formulas derived from cow's milk unsuccessful. Breast milk is used as the guide, to a varying degree, by most manufacturers of infant feeding. The proprietary, prepared infant foods are able to achieve considerable modification. In addition to reducing the protein level by augmenting the carbohydrate, they substitute vegetable oils or animal fats for butter fat, add vitamins and adjust minerals to approach breast milk composition. Further alteration of curd formation is also possible by physicochemical means.

The past three decades have produced most of our current knowledge in infant nutrition. Mortality due to malnutrition in infants denied breast milk, at 54 per cent in 1863, is practically nonexistent today. When feeding technique, and the volume, composition, and caloric intake of the cow's milk formula used are known to meet accepted pediatric standards, there is almost complete certainty that the infant will prosper.

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What Pharmacy Week Winners Will Receive

Winners of the 1954 Awards listed below will receive their prizes at the first general session of the Miami Beach convention.

Retail Pharmacy Awards

First prize of $200 and plaque will go to Milton A. Friedman of Harris Pharmacy, Baltimore, Md. Second prize of $100 and plaque will go to Joseph A. Hailer, Owl-Rexall Drug Store, Los Angeles, Cal. Third prize of $50 and plaque will go to Henry D. Kehr, Trenton, N. J.

Certificates of merit will be awarded to Lillie Mazzara and Sam S. Romano, Five Points Apothecary, Birmingham, Ala.; A. J. Toller, Toller Drug Company, Sioux City, Iowa; W. H. Geiser, East Side Pharmacy, Fremont, Ohio.

Pharmacy College Awards

First prize plaque will go to the Department of Pharmacy, Philadelphia College of Pharmacy and Science (Pa.). Second prize (certificate of merit) goes to the A.PH.A. Student Branch of the University of Maryland, Baltimore. Third prize (certificate of merit) goes to Temple University School of Pharmacy, Philadelphia.

Public Exhibit Awards

First prize plaque goes to the A.PH.A. Student Branch of the Medical College of Virginia School of Pharmacy, Richmond. Second prize (certificate of merit) goes to Kappa Psi Fraternity, College of Pharmacy, University of Arizona, Tucson. Third prize (certificate of merit) goes to the Interfraternity Council, School of Pharmacy, University of Pittsburgh, Pa.

Hospitals and Clinics Awards

First prize plaque will go to Walter M. Frazier, Springfield City (Ohio) Hospital. Second prize (certificate of merit) goes to Anne M. Bruggeman, St. Vincent's Hospital, Toledo, Ohio. Third prize (certificate of merit) goes to William Slabodnick, Massillon (Ohio) City Hospital.

Improving Ephedrine Sulfate Jellies

By William C. Fiedler and Charles O. Lee

Here the authors chart ways of improving both formula and procedure for the official ephedrine sulfate jelly in a paper presented before A.PH.A.'s Practical Pharmacy Section at the Boston convention. Fiedler is engaged in research at Purdue University while Dr. Lee, formerly of Purdue, now teaches at Ohio Northern University.

EPHEDRINE SULFATE JELLY has appeared in the past three editions of the National Formulary. The formulas and procedures have remained practically unchanged except that the First Supplement to N.F. VII permitted the omission of the dwarf pine needle oil (1). The use of sodium phosphate as a stabilizer is permitted in the monographs for this jelly.

Many objections have been made to this preparation. The product is thin and lacks the consistency of a jelly. This makes it difficult to apply to the nasal passages and for dispensing in collapsible tubes. It is readily susceptible to mold growth. On samples prepared in our laboratory we observed a heavy black mold growth after one month. The official procedure requires that the formula mixture be allowed to macerate for one week, then strained before being completed for use. Furthermore, it has been pointed out that tragacanth jellies vary in viscosity with the quality of the gum used (2).

Objectives of Study

This study was directed at ways of improving both the formula and the procedure of the official ephedrine sulfate jelly. Jellifying substances such as acacia, karaya gum, and starch were mixed with tragacanth in varying proportions, but these mixtures proved to possess one or more objectionable physical properties such as low viscosity, a grainy appearance, or tackiness. The methylcelluloses and carboxymethylcelluloses were tried but rejected because of the difficulty of preparation, stickiness, and the tendency to form hard films on drying.

Sodium alginate, however, proved to be a satisfactory jelling agent. Its advantages are that it can be made into a mucilage by suspending the powdered sodium alginate in the proper amount of glycerin and adding either hot or cold water with stirring. No heat is required and no further processing is needed. The jelly is water-soluble. Two disadvantages are that preservatives are necessary and it has a tan color.

Many ephedrine sulfate jelly formulas were prepared in the course of this study and compared as to their acceptable properties. Those prepared with sodium alginate were the most promising and were studied to determine if and to what extent viscosities changed with age.

The viscosity measurements on these jellies were made with a Brookfield viscosimeter over a period of 21 days. Readings indicated no significant change in their viscosities for the first 12 days. At the end of that time, those jellies prepared with propylene glycol showed a gradual increase in viscosity as compared to those made with glycerin. We offer no explanation for this difference and feel that it deserves further study.

In 1949, Canadian workers reported the successful preparation of ephedrine sulfate jelly using sodium alginate as the jelling agent (3). They found that its jelling property was improved by the addition of a small amount of calcium chloride solution. This is attributed to the formation of the less soluble calcium alginate from the sodium alginate and the calcium ions. We repeated the procedures of these workers and observed that after aging for about two weeks those jellies made with sodium alginate alone were of a better consistency than those to which the calcium chloride solution had been added. It appeared that those jellies which contained the calcium alginate lost water on standing.

Addition of Preservatives

The official ephedrine sulfate jellies which we prepared developed mold growths after about four weeks. We then made an effort to prevent the growth of mold by adding preservatives to a series of the formulas. Among the antiseptics tried were methyl and propyl parabens and sodium benzoate. The latter was selected as the preservative of choice because it is readily soluble and does not produce a cloudiness in the jellies as do the parabens.

Table II—Results of Ephedrine Assays

Product	Initial Concn %	Concn after 3 weeks, %	Loss %
Formula No. 1	1.39	1.08	22.30
Formula No. 2	1.38	1.17	15.20
Formula No. 3	1.32	1.09	16.30
Formula No. 4	1.07	0.99	7.50
Ephedrine sulfate U. S. P.	99.95	99.43	0.52

Four ephedrine sulfate jellies (Table I) were subjected to a temperature of 40° for six weeks and observed for changes in appearance and physical properties. No. 1 is the official formula. The other three are modifications of it.

At the end of six weeks the jellies with preservatives added showed no growth of mold. However, those containing the parabens, while free from mold, had a cloudy appearance. Formula No. 4, containing sodium benzoate, remained both clear and free from mold when prepared with glycerin. When propylene glycol was used to replace the glycerin in the formula, the product became cloudy and showed a slight separation of water.

Loss of Ephedrine on Aging

The four ephedrine sulfate jellies were assayed for their initial alkaloidal content according to the official procedure. They were then stored in an oven at 40° for three weeks and assayed again. Three weeks at this temperature is calculated to be about the equivalent in effect of three to four months at room temperature (4). As a control, samples of the ephedrine sulfate were assayed before and after this same aging treatment. The results of these assays are given in Table II.

These results indicate that the dry ephedrine sulfate is stable even at slightly elevated temperatures. On the other hand, the jellies of this salt showed a marked deterioration under the conditions of this test. Of these four products, the sodium alginate-glycerin-sodium benzoate formula showed the best stability.

The following formula is suggested as an improved ephedrine sulfate jelly.

Ephedrine Sulfate Jelly—Improved

Ephedrine sulfate	10.0
Sodium alginate	40.0
Methyl salicylate	0.1
Eucalyptol	1.0
Sodium benzoate	2.0
Glycerin	100.0
Distilled water	857.0
To make about	1000.0

Procedure.—Triturate the sodium alginate with the glycerin in a mortar until a smooth paste is formed. Dissolve the ephedrine sulfate and sodium benzoate in the distilled water and add the solution in divided portions to the sodium alginate-glycerin mixture, triturating after each addition. Finally add the oils, mix well, and allow to stand about three hours.

This mixture is lumpy when the ingredients are first mixed but forms a smooth jelly after standing for about 3 hours. Dwarf pine needle oil was not included in this formula since its omission was permitted in N. F. VII. The assay procedure is the same as that for the present official jelly.

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Table I—Ephedrine Sulfate Jelly Formulas

	Formula 1	2	3	4
Ephedrine sulfate	10.0 Gm.	10.00 Gm.	10.00 Gm.	10.0 Gm.
Tragacanth	10.0 Gm.	...	...	...
Glycerin	150.0 Gm.	100.00 Gm.	...	100.0 Gm.
Methyl salicylate	0.1 ml.	0.10 ml.	0.10 ml.	0.1 ml.
Eucalyptol	1.0 ml.	1.00 ml.	1.00 ml.	1.0 ml.
Dwarf pine needle oil	0.1 ml.	0.10 ml.	0.10 ml.	0.1 ml.
Sodium phosphate	1.6 Gm.	...	...	...
Distilled water	830.0 ml.	850.00 ml.	850.00 ml.	850.0 ml.
Methylparaben	...	0.08 Gm.	0.08 Gm.	...
Propylparaben	...	0.03 Gm.	0.03 Gm.	...
Sodium alginate	...	40.00 Gm.	40.00 Gm.	40.0 Gm.
Propylene glycol	...	...	100.00 ml.	...
Sodium benzoate	...	...	...	2.0 Gm.

NEW PRESCRIPTION PRODUCTS

All items on which information has been received in the past thirty days are reported here. Manufacturers are urged to send details of their new products as early as possible, so that pharmacists through these pages will have full information at the same time, or even before, products are detailed to the physician. For inclusion in this free editorial department, literature should be sent to the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, *2215 Constitution Avenue, N. W., Washington 7, D. C. Where possible, all descriptions should follow the style shown on these pages.*

Enterobiotic Tablets

Description: Each yellow tablet contains: Terramycin (as HCl salt), 50 mg.; and neomycin sulfate, 250 mg.

Indications: Preoperative antisepsis of the gastrointestinal tract.

Administration: Orally as directed.

Form Supplied: Bottles of 40 tablets.

Source: Pfizer Laboratories, Division of Chas. Pfizer & Co., Inc., Brooklyn, N. Y.

F-Cortef Ointment

Description: Each Gm. of ointment contains 1 or 2 mg. (0.1 or 0.2%) of fluorohydrocortisone.

Indications: For relief of skin diseases such as eczema, contact dermatitis, pruritis, and atopic dermatitis.

Administration: Topically.

Form Supplied: 5-Gm. tubes.

Source: The Upjohn Company, Kalamazoo, Mich.

l-Glutavite Powder

Description: Each packet of *l*-Glutavite contains: monosodium *levo*-glutamate, 3.48 Gm.; niacin, 45 mg.; thiamine mononitrate, 0.6 mg.; riboflavin, 0.8 mg.; ascorbic acid, 30 mg.; ferrous sulfate, 11 mg.; and dicalcium phosphate, 910 mg.

Indications: Therapeutic dietary supplement for elderly patients whose symptoms indicate the need for a "cerebral tonic."

Administration: Three to five packets daily, mixed with tomato or vegetable juices or sprinkled upon already cooked meat or vegetables.

Form Supplied: Cartons of 30 packets, each packet containing 5 Gm. of powder.

Source: Gray Pharmaceutical Co., Inc., Newton, Mass.

Mictine Tablets

Description: Each uncoated tablet contains 200 mg. of aminometramide (1-allyl-3-ethyl-6-aminotetrahydropyrimidinedione).

Indications: To control edema in patients with mild congestive heart failure; and in more severe cases for diuresis, particularly when mercurial diuretics are contraindicated.

Administration: Initial dosage, 1 to 4 tablets with meals, in divided doses on alternate days or for three consecutive days, then omit dosage for four days. For severe congestive conditions, 4 to 6 tablets daily on an interrupted dosage schedule.

Form Supplied: Bottles of 100 tablets.

Source: G. D. Searle & Company, Chicago, Ill.

Unitensen Tablets

Description: Each Unitensen tannate tablet contains 2 mg. of cryptenamine, a newly isolated alkaloid fraction of *Veratrum viride*.

Indications: For control of high blood pressure.

Administration: Three to six tablets daily as directed by physician. It is claimed to have a high safety factor and may be given for prolonged periods.

Form Supplied: Bottles of 100.

Source: Irwin, Neisler & Co., Decatur, Ill.

Other New Products——

(Chemicals, clinical trial drugs, diagnostic aids, and equipment for the retail and hospital pharmacy)

Bevidoral Filmtabs

Film-sealed tablets containing in each tablet 0.5 U.S.P. unit of vitamin B_{12} with intrinsic factor concentrate have been marketed by *Abbott Labora-*

tories. Two tablets daily are recommended as the oral dose in the treatment of pernicious anemia and for primary treatment and maintenance therapy of macrocytic anemia. Bevidoral is supplied in bottles of 25 and 100 Filmtabs.

Biolator Newcastle Vaccine (Vet.)

Each 500-dose vial of Biolator Newcastle Vaccine contains 3 Gm. of dust enough for the immunization of 500 chickens, regardless of size. Although the vaccine can be used on healthy birds of any age, it is recommended that it be administered to birds at 5 to 7 days of age. For maximum protection of breeders and layers, immunization every 4 to 6 months is suggested. A temporary decrease in egg production may result when healthy, susceptible laying birds are immunized. Immunization by dust must be accomplished in a closed area. All doors and windows should be closed and ventilating fans should be shut off for 15 to 30 minutes so that the birds will breathe the dust particles in high concentrations. The dust pump should be reserved exclusively for immunization purposes. Biolator Newcastle Vaccine is marketed by *Lederle Laboratories.*

Colpatab Vaginal Tablets—Improved

The *Purdue Frederick Company* has added tyrothricin to the formula for Colpotab vaginal tablets for trichomoniasis. The improved product is available in packages of 12.

Geravims Tablets

Each tablet contains the following combination of nutritional supplements: vitamin A, 5,000 U.S.P. Units; vitamin D, 1000 U. S. P. Units; thiamine HCl, 2.5 mg.; riboflavin, 3 mg.; ascorbic acid, 50 mg.; pyridoxine HCl, 0.5 mg.; calcium pantothenate, 5 mg.; niacinamide, 30 mg.; vitamin B_{12}, 2 mcg.; folic acid, 0.25 mg.; vitamin K, 2 mg.; iron (ferrous sulfate), 5 mg.; calcium, 112.5 mg.; phosphorus (calcium and phosphorus from dicalcium phosphate), 75 mg.; rutin, 20 mg.; choline bitartrate, 10 mg.; DL-methionine, 10 mg.; inositol, 10 mg. *The Paul Plessner Company* markets Geravims tablets and recommends one or more tablets daily for geriatric and debilitated patients. The tablets are available in bottles of 100 and 500.

Gestatabs Tablets

Prenatal supplement tablets, marketed by *White Laboratories, Inc.*, contain in two capsule-shaped tablets: vitamin A, 6,000 U. S. P. Units; D, 600 U. S. P. Units; K (menadione), 2 mg.; B_{12} activity equiv., 2 mcg.; folic acid, 1 mg.; ascorbic acid, 100 mg.; thiamine mononitrate, 3 mg.; riboflavin, 5 mg.; pyridoxine HCl, 1.5 mg.; calcium pantothenate, 10 mg.; nicotinamide, 30 mg.; ferrous sulfate, 120 mg.; molybdenum oxide, 1.8 mg.; calcium (as gluconate and carbonate), 380 mg. The recommended dose is one tablet b. i. d. Gestatabs are supplied in bottles of 60 and 1000.

Labeling of Sulfonamide Nose Drops

Sulfonamide nose drops need not be labeled "for sale by prescription only" if such preparations bear adequate directions for use and a warning statement cautioning against their use by patients previously sensitized to sulfonamides.

Lipoprotein Powder

A protein-caloric supplement, Lipoprotein, has been marketed by *The Upjohn Company* in 1/2-lb. and 1-lb. packages. The flavored powdered material, 2 rounded tablespoonfuls, mixed with milk, 6 fl. oz., makes one "Lipoprotein Milk Drink," and 3 drinks per day are recommended for debilitated, sub-par patients.

Mandelamine Hafgrams—New Dosage Form

Methenamine mandelate is now marketed by the *Nepara Chemical Co., Inc.* as enteric coated tablets containing 0.5 Gm. in each Mandelamine Hafgram tablet. The new dosage form is available in bottles of 100, 500, and 1000 tablets.

Mycostatin Tablets

Mycostatin (nystatin), an antifungal antibiotic, has been marketed by *E. R. Squibb & Sons* as tablets containing 500,000 units in each tablet. The drug is stated to be effective in suppressing intestinal fungi such as *Candida albicans* (Monilia) which might grow excessively during antibiotic medication. The tablets can be crushed and added to milk, chocolate syrup, or other nonacidic flavored vehicles.

Peritrate—New Tablet Forms

Warner-Chilcott Laboratories have made available Peritrate tetranitrate 10-mg. enteric coated tablets, for patients who are subject to nighttime

attacks of angina pectoris. One or two of the enteric coated tablets plus the regular Peritrate dosage are suggested for all-night protection. Peritrate is also being made available in 20-mg. plain tablets, supplementing the 10-mg. tablets currently available. The 10-mg. enteric coated tablets may be obtained in bottles of 100 and 500; the 20-mg. plain tablets are available in bottles of 100 and 500.

Phyatromine-H—New Package Size

Phyatromine-H is now available from the *Kremers-Urban Co.* in 10-cc. vials. This package is intermediate to boxes of 25 1-cc. ampuls and vials of 30 cc.

Polycycline Pediatric Drops

A fruit-flavored suspension containing in each cc. 10 mg. of tetracycline, in a vegetable oil vehicle, has been marketed by *Bristol Laboratories*. The suspension is stable at room temperature for 18 months. It may be administered orally with or without admixture with other liquids. Polycycline Pediatric Drops is supplied in 10-cc. bottles with calibrated dropper for 25- and 50-mg. dosages.

Premarin Lotion

A lotion containing in each cc. 1 mg. of conjugated estrogens, expressed as sodium estrone sulfate, in 30% isopropanol, has been marketed by *Ayerst, McKenna & Harrison, Ltd.* Intended for topical therapy in acne vulgaris, seborrhea, and seborrheic alopecia. Premarin lotion is supplied in 60-cc. bottles with applicator.

Prenatum-Cal Tablets

A vitamin-mineral supplement providing phosphorus-free calcium, established minimum daily requirements of other vitamins and iron, together with substantial amounts of other essential dietary substances, Prenatum-Cal tablets are marketed by *B. F. Ascher & Company, Inc.* They are recommended for assuring optimum nutrition for the pregnant woman, and are useful in other conditions likely to be accompanied by suboptimal nutrition. The dose is 1 tablet three times a day. Prenatum-Cal tablets are available in bottles of 100 and 1,000. The same formula, except that the calcium is present as dicalcium phosphate, is marketed as Pre-Natum tablets.

Pydirone Ampuls

Pydirone, sodium 1-phenyl-2,3-dimethyl-4-methylaminopyrazolon-N-methanesulfonate, is a nonnarcotic analgesic recently introduced by *George A. Breon & Company*. It is indicated in the treatment of rheumatic fever when salicylates cannot be tolerated, and to relieve pain in severe headache, neuralgia, biliary and renal colic, and acute respiratory infections. The ampul solution is administered subcutaneously or intramuscularly in 1- or 2-cc. doses, repeated if necessary in two to three hours. It is supplied in 2-cc. ampuls in boxes of 25.

Pyripan Ointment

A dermatologic ointment containing pyridoxine and pantothenylol in a water-miscible base has been marketed by *Donley-Evans & Company*. It is supplied in 1-oz. jars.

Rau-sed Tablets

Rau-sed is the recently marketed *E. R. Squibb & Sons* brand of crystalline reserpine (*Rauwolfia serpentina* alkaloid). It is available in tablets of 0.1, 0.25, 0.5 and 1.0 mg. of reserpine.

Remanden-100 Suspension

Suspension Remanden-100 contains in each 5 cc.: penicillin, 100,000 units; and Benemid (probenecid), 0.25 Gm. This flavored liquid product by *Sharp & Dohme* is packaged in 60-cc. bottles and will retain its potency for at least 2 years without refrigeration. It is indicated for oral administration in the treatment of infections in which penicillin is useful.

Resion-PMS

A combination of Resion (polyamine methylene resin, sodium aluminum silicate, magnesium aluminum silicate) with polymyxin-B, phthalylsulfacetamide, and esters of *p*-hydroxybenzoic acid, in a butterscotch-flavored syrup was marketed recently by *The National Drug Co.* The product is indicated in the control of diarrheas caused by Gram-negative organisms, and in ulcerative colitis. It is available in 4-fl. oz. bottles, on prescription only.

Roetinic Capsules

Roetinic Capsules, marketed by *J. B. Roerig & Co., Division of Chas. Pfizer & Co.*, contain in each soft gelatin, mahogany red capsule one U. S. P. unit of vitamin B_{12} with intrinsic factor concen-

trate, folic acid, ascorbic acid, ferrous sulfate, molybdenum, cobalt, copper, manganese, and zinc. Roetinic is indicated in the treatment of all anemias that can be controlled and treated without transfusion and may be used as adjunctive therapy in anemias accompanying cancer and leukemia and in congenital anemias. The dosage is one Roetinic capsule a day, administered orally. It is supplied in bottles of 30 and 100.

Roncovite-OB—New Dosage Form

Roncovite-OB, a new dosage form of Roncovite supplied by *Lloyd Bros., Inc.*, contains in each enteric-coated, red, capsule-shaped tablet: cobalt chloride, 15 mg.; ferrous sulfate, exsic., 0.2 Gm.; calcium lactate, 0.9 Gm.; and vitamin D, 250 units. Roncovite-OB is recommended for the prophylaxis and treatment of anemia of pregnancy.

Sandril with Pyronil Tablets

Each pink, sugar-coated tablet contains: reserpine, 0.25 mg.; and pyrrobutamine (Pyronil), 7.5 mg. The product is marketed by *Eli Lilly and Company* for reserpine (*Rauwolfia* alkaloid) therapy with less incidence of nasal stuffiness which *Rauwolfia* preparations cause in some patients. Sandril with Pyronil is supplied in bottles of 100 and 1,000 tablets.

Serpasil Ampuls, Elixir and Tablets

Three additional dosage forms of Serpasil have recently been marketed by *Ciba Pharmaceutical Products Inc.* The white, scored Serpasil tablets each contain 1 mg. of reserpine. Serpasil elixir contains in each 4 cc., 0.2 mg. of reserpine. Serpasil ampuls contain 2.5 mg. of reserpine per cc. The ampuls are available in cartons of 5 and 50 2-ml. ampuls; the elixir is available in 16-oz. bottles; the 1-mg. tablets are available in bottles of 100, 500, 1,000 and 5,000.

Steclin Hydrochloride Capsules

Steclin hydrochloride (tetracycline HCl) has recently been marketed by *E. R. Squibb & Sons* in 50- and 100-mg. capsules (bottles of 25 and 100) and 250-mg. capsules (bottles of 16 and 100).

Stilbosol Hormone Premix (Vet.)

A premix which is added to feed formulas to stimulate the growth of fattening cattle and which contains synthetic diethylstilbestrol has been marketed by *Eli Lilly and Company.*

Suppository Mold and Container

Suppository mold equipment, in two sizes, which permits filling of 64 or 256 suppositories by addition of the fused mixture into units of the desired size and shape is available from *The Polyclosure Corporation.* The removable units of the mold are made of polystyrene (plastic) and, after capping the units with polyethylene plastic caps, they act as unit containers until the suppository is to be used.

Targot Mastitis Ointment (Vet.)

Lederle Laboratories have recently marketed a combination of Aureomycin (chlortetracycline), neomycin, dihydrostreptomycin and penicillin in an oil base as Targot mastitis ointment. The ointment remains largely in the udder up to 72 hours and is not withdrawn when the quarter is milked. The ointment is available in 1/4-oz. tubes with an udder infusion tip.

Terramycin Animal Formula—Tablets and Soluble Powder

Chas. Pfizer and Company, Inc. has recently announced a line of animal health products—Terramycin Animal Formula, tablets and soluble powder. The Formula is available in packets of two 500-mg. scored tablets and in jars containing 1/4 and 1/2 lb. of soluble powder with a potency of 25 Gm. of Terramycin per pound.

Tetrazets Troches

Fruit-flavored lozenges containing bacitracin, tyrothricin, and neomycin, with benzocaine, for local therapy of mouth and throat irritations and infections have been marketed by *Sharp and Dohme, Division of Merck & Co., Inc.* Tetrazets are available in vials of 12 troches.

Thenfadil-SA—New Dosage Form

Thenfadil-SA, recently introduced by *Winthrop-Stearns, Inc.*, consists of two concentric layers separated by an enteric coating, each layer containing 15 mg. of the antihistamine Thenfadil hydrochloride. The dose in the outer layer acts rapidly, affording relief for three to six hours. During that interval, the enteric coating dissolves gradually and releases the second dose to sustain the antihistaminic action for an additional three to six hours. One tablet in the morning generally provides antihistaminic protection for the entire day.

Thenfadil-SPC—Replaces Thenfadil-APC

Thenfadil-SPC, containing salicylamide, phenacetin, and caffeine, with the antihistamine Thenfadil, has been introduced by *Winthrop-Stearns, Inc.* as an over-the-counter product. Thenfadil-APC, which contained aspirin in place of salicylamide, has been discontinued.

Theominal R.S. Tablets

Winthrop-Stearns has made available a combination of Theominal (theobromine and phenobarbital) and *Rauwolfia serpentina* alkaloids (alseroxylon fraction) as Theominal R.S. for use in the treatment of hypertension. Theominal R.S. is supplied in bottles of 100 tablets for prescription use.

Thorazine Ampuls

Smith, Kline & French Laboratories have added 1-cc. ampuls containing 25 mg. of Thorazine (chlorpromazine HCl) to the available dosage forms of the drug. Thorazine is now indicated for the control of severe nausea and vomiting, and as a sedative in neuropsychiatry. The 1-cc. ampuls are packaged in boxes of six.

Thorazine Tablets—New Sizes

Smith, Kline & French Laboratories have added 50-mg. and 100-mg. tablets of Thorazine (chlorpromazine HCl) to their available dosage forms of the drug. Both are available in bottles of 50 and 100. To provide visible differences between the 10-, 25-, 50-, and 100-mg. tablets of chlorpromazine HCl, *SKF* is now marketing the 25-mg. tablet in a smaller size.

Tronothane Hydrochloride 1%, Jelly, Cream, Lotion, and Solution

Tronothane HCl (pramoxine HCl), the surface anesthetic recently introduced by *Abbott Laboratories*, is the HCl salt of 4-*n*-butoxyphenyl-gamma-morpholinyl-propyl ether. It is claimed to have low toxicity and low sensitization, and is indicated for relief from discomfort and pain in hemorrhoids and rectal surgery, episiotomies, anogenital pruritis, itching dermatoses, moderate burns, and sunburns. Tronothane HCl 1% is a prescription item supplied as jelly, cream, lotion, and sterile aqueous solution.

Trophite Tablets—New Dosage Form

Trophite, originally prepared only in liquid form by *Smith, Kline & French Laboratories*, is now available in tablet form for older patients. Each tablet is equivalent to 5 cc. (1 teaspoonful) of the liquid preparation and contains 25 mcg. of vitamin B_{12} and 10 mg. of crystalline vitamin B_1.

Urinal for Ambulatory Female Patients

A light-weight urinal assuring maximum comfort, safety, and sanitation to female sufferers from urinary troubles has been developed by *Protecto-Wear, Inc.* When the urine reaches the storage chamber, the specially designed valves close automatically to prevent overflow or backflow. Storage capacity is approximately 32 ounces.

Vetstrep Spray (Vet.)

Vetstrep Spray, an aerosol spray containing dihydrostreptomycin for the treatment of air sac disease (CRD) in chickens is being made available by *Merck & Co., Inc.* to wholesale distributors and to veterinary product manufacturers for sale under the Merck trade name, Vetstrep Spray, or under their own trade names. It will be available to poultrymen from feed and remedy dealers, as well as in drug stores. Vetstrep is also available as granules to be used in drinking water for treatment of CRD.

Vi-Magna Syrup with B_{12}

Lederle Laboratories has announced that vitamin B_{12} is now included in the formula of Vi-Magna syrup. Vi-Magna is a multivitamin preparation for the prevention of vitamin deficiencies. The syrup is supplied in bottles of 4 fl. oz., 16 fl. oz., and 1 gallon.

Wydase Solution—New Dosage Forms

Wydase (hyaluronidase) is now marketed by *Wyeth Laboratories* in a stable solution. It is used in the administration of therapeutic fluids by hypodermoclysis and local anesthesia. Wydase Solution is available in vials of 150 turbidity-reducing units stabilized in normal saline solution.

(See New Products Index on Page 126)

Typical Days

FROM THE SECRETARY'S DIARY FOR JANUARY, 1955

3rd An auspicious start for the new year with an afternoon conference between Commissioner Larrick of the Food and Drug Administration and members of his staff and members of the professional staff of the AMERICAN PHARMACEUTICAL ASSOCIATION at the Commissioner's office.

10th Saddened by a wire from Pat Costello announcing the passing of Mrs. E. C. Elliott, wife of the distinguished director of the Pharmaceutical Survey; a charming lady who had endeared herself to the pharmaceutical fraternity in general as she joined her distinguished husband at meetings of the AMERICAN PHARMACEUTICAL ASSOCIATION. In the afternoon a visit from Dean Bliven and David Stiles of the Abbott Laboratories was thoroughly enjoyed.

14th Today entertaining the A.PH.A. Committee on Public Relations which gathered to judge the 1954 National Pharmacy Week display photographs and to transact other business looking forward to the observance of 1955 National Pharmacy Week. All of this under the chairmanship of J. Warren Lansdowne with a pleasant interlude for lunch at the Watergate Inn here in Washington.

18th Yesterday and today orienting various new staff members in the affairs of the ASSOCIATION and completing preliminary reports for the Finance Committee which is at work on the budget for 1955 and then off to Chicago.

21st The past two days busy in the Palmer House in session with the American Council on Pharmaceutical Education and a joint session with the Executive Committee of the American Association of Colleges of Pharmacy. Much conversation with respect to accreditation of colleges of pharmacy and the review of reports of inspections which reveal educational institutions in pharmacy to be in relatively good shape although a few schools seem to have difficulty in meeting minimum standards. Last night a meeting of the Finance Committee of the Council of the A.PH.A. with Chairman Henry Gregg coming in from Minneapolis and Council Chairman Jenkins coming up from Lafayette, Indiana.

At noon today a luncheon meeting with officers of the Chicago Branch of the A.PH.A. including Messrs. Parker, Little, Crawford, and Webster of the Branch and Tom Rowe of the Committee on Local Branches and Treasurer Schaefer.

Also a visit with Bob Stormont of the A.M.A. Council on Pharmacy and Chemistry and other A.M.A. staff members.

22nd Early arrival in Washington from Chicago and then to the office for a most pleasant visit with Dr. Paul S. Pittenger recently retired as vice-president of Sharp and Dohme, who has been an ardent A.PH.A. worker for nearly half a century and who has rarely missed a meeting in 40 years.

24th A conference with the ASSOCIATION'S architects to outline and consider plans for a small addition to our present building which is to house clerical activities and accumulated books, manuscripts, and correspondence.

25th Today a visit from Secretary Robert Abrams of the American College of Apothecaries and discussing with him and Secretary Niemeyer of the A.S.H.P. some of the details of the program for the Miami Beach Convention.

26th Former Secretary Frank Pokorny of the New York branch of the A.PH.A. visiting here today to discuss the proposal for a New York Convention of the AMERICAN PHARMACEUTICAL ASSOCIATION in 1957, to celebrate the 50th anniversary of the New York branch.

29th This morning a telephone conversation with A.P.M.A. President Hardt who was on his way through Washington and interested, as usual, in the broad program of public relations. At lunch with members of the senior class of the Philadelphia College of Pharmacy and Science who were en route to Indianapolis for a visit to the Lilly Laboratories. Dr. Powers, as usual, acted as the principal guide in arranging for a trip through the building, ably assisted by members of the headquarters staff.

31st The month about gone and now getting ready for the annual Washington meeting of the Council. Among the early arrivals was Tom Wyatt, chairman of the House of Delegates, who had much to suggest with respect to the coming convention.

IMPORTANT ANNOUNCEMENT

introducing new sizes and forms of established Warner-Chilcott products

---

Peritrate®

TETRANITRATE

(brand of pentaerythritol tetranitrate)

Effective prophylaxis against angina pectoris in convenient sizes and dosage forms

			SIZE	COST TO YOU
		10 mg.	100 500 5000	$ 2.50 10.00 80.00
New	double strength	20 mg.	100 500	3.75 15.00
New	prolonged protection	Enteric Coated (10 mg.)	100 500	2.50 10.00
		with Phenobarbital	100 500 5000 (NEW)	2.75 11.00 88.00

Methium®

CHLORIDE

(brand of hexamethonium chloride)

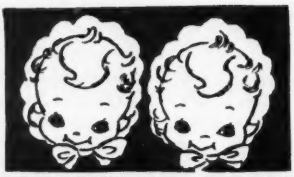
The most potent hypotensive agent, now enhanced in usefulness for wider indications

			SIZE	COST TO YOU
		125 mg.	100 500	$ 2.00 8.00
		250 mg.	100 500	3.00 12.00
		500 mg.	100 500	5.00 20.00
New	lower dose, added sedation	Methium (125 mg.) with Reserpine (0.125 mg.)	100 500	3.50 14.00
		Methium (250 mg.) with Reserpine (0.125 mg.)	100 500	4.50 18.00

WARNER-CHILCOTT

IS THAT **NEW DRUG**

IDENTICAL...



Reserpine
Chemically pure alkaloid extract from Rauwolfia Serpentina.
Dose: 0.25 Mg. 3 times daily to desire effect, then reduce for maintenance.

As:			
	#Reserpine (Various)	In 0.25 Mg. tablets.	4.7-11.7
	#Crystoserpine (Dorsey)	In 0.25 Mg. tablets.	
	Reserpoid (Upjohn)	In 0.1 and 0.25 Mg. tablets.	
	#Rau-sed (Squibb)	In 0.1, 0.25 and 0.5 Mg. tablets.	
	#Sandril (Lilly)	In 0.25 Mg. tablets.	
	#Serfin (Parke-Davis)	In 0.25 Mg. tablets.	
	#Serpanray (Panray)	In 0.1 and 0.25 Mg. tablets.	
	Serpasil (Ciba)	In 0.1 and 0.25 Mg. tablets.	
	Serpiloid (Riker)	In 0.25 Mg. tablets.	

or
...SIMILAR

Page 28. MULTI-VITAMINS WITH B-12 AND/OR FOLIC ACID CAPSULES AND TABLETS.

CONTAINS PER CAPSULE OR TABLET. (1)

Product and Mfg.	B-1	B-2	Nia-cin.	# P.A	B-6	C	Unit A	Unit D	E	Mcg. B-12	P.A	Cost* Index
Theracebrin (Lilly)	15	10	150	20	3	150	25000	1500	25	10	1/3	17.6
Pluravin (Winthrop)	15	10	150	10	2	150	25000	1000		5	1	18.0
Therapeutic M-V (Stuart)	10	10	150				25000	1000		5		11.3
Mulsavite P (S & D)	5	10	150	10	1	150	20000	2000	10	5	5	22.0
Mulsavite (Sharp-Dohme)	5	10	150	10	1	150	20000	2000	10	5		12.6
Soluthera (Ives)	10	10	100	5	1	150	12500	1000	3⅓	2.5	(b)	12.7
Vio-12 (Rowell) (a)	10	10	40	10	1	150	10000	1200		1	0.5	10.0
Perfolin (Lederle)	10	5	150			150	25000	1000		5	5	20.0
Vi-Aqua Therapeut' (USVC)	10	5	100	10	1	150	12500	1000	5	2	(b)	12.7

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Hospital Week Slated May 8–14

Movers behind National Hospital Week—scheduled this year for May 8 to 14—are calling upon hospital pharmacists everywhere for greater participation in this, the third observance of National Hospital Week.

More specifically, hospital pharmacists are being urged to take leading roles in vocation guidance programs, television-radio panels and career days during the Week, theme of which is to be "Your Hospital . . . A Tradition of Service." Also pegged on this theme will be individual hospital pharmacy displays.

Underscoring the importance of such displays, the AMERICAN PHARMACEUTICAL ASSOCIATION again this year will award a plaque for the best hospital pharmacy display. To be eligible for this award, hospital pharmacists must be members of the American Society of Hospital Pharmacists and A.PH.A. Displays must have the approval of hospital administrators and they cannot incorporate any private advertising material.

Two 8 by 10-inch glossy photos of entries are to be sent to American Society of Hospital Pharmacists' Secretary Gloria Niemeyer not later than June 1 for judging. A.PH.A.'s Public Relations Committee will select the winner. Awards will be made at the A.S.H.P. annual meeting.

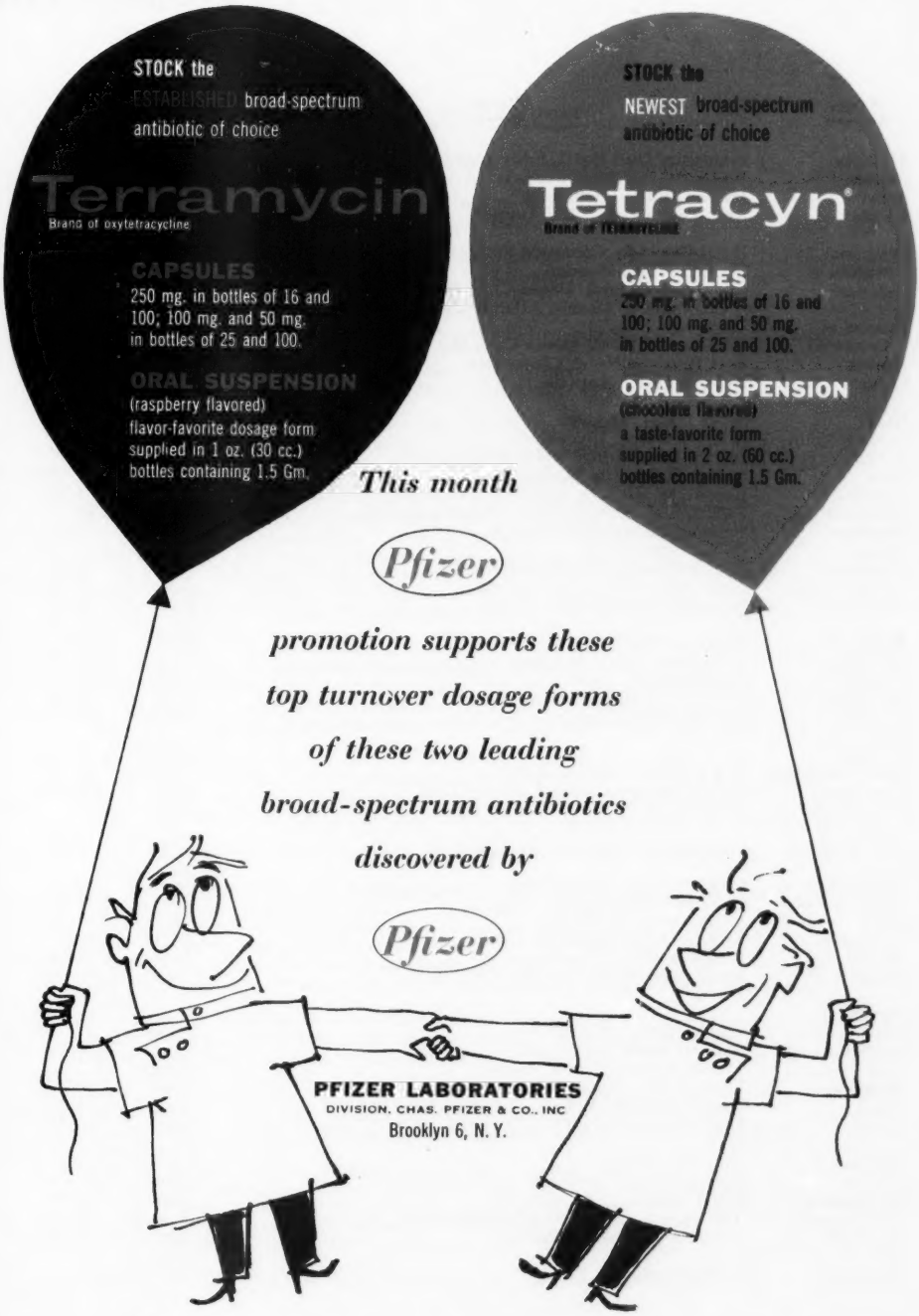
Floor Plan Portfolio Offered

A "Portfolio of Designs of Hospital Pharmacies," containing working floor plans of 23 active pharmacies serving hospitals with 80 to 1,500 beds, is being offered by the Hospital Sales Division, Parke, Davis & Company, Detroit 32, Mich.

The portfolio devotes two pages to designs of pharmacies in hospitals with less than 150 beds, four pages to those in hospitals with 150–300 beds, and 12 pages to those in hospitals with more than 300 beds.

Simons Appointed

Robert Simons, Jr., has been appointed chief pharmacist at Memorial Hospital, Wilmington, Del. Simons is a graduate of the Philadelphia College of Pharmacy and Science and is a member of the AMERICAN PHARMACEUTICAL ASSOCIATION, the American Society of Hospital Pharmacists, and the Philadelphia Association of Hospital Pharmacists.


STOCK the
ESTABLISHED broad-spectrum
antibiotic of choice
Terramycin
Brand of oxytetracycline
CAPSULES
250 mg. in bottles of 16 and 100; 100 mg. and 50 mg. in bottles of 25 and 100.
ORAL SUSPENSION
(raspberry flavored)
flavor-favorite dosage form
supplied in 1 oz. (30 cc.) bottles containing 1.5 Gm.
STOCK the
NEWEST broad-spectrum
antibiotic of choice
Tetracyn®
CAPSULES
250 mg. in bottles of 16 and 100; 100 mg. and 50 mg. in bottles of 25 and 100.
ORAL SUSPENSION
(chocolate flavored)
a taste-favorite form
supplied in 2 oz. (60 cc.) bottles containing 1.5 Gm.
This month
Pfizer
promotion supports these
top turnover dosage forms
of these two leading
broad-spectrum antibiotics
discovered by
Pfizer
PFIZER LABORATORIES
DIVISION, CHAS. PFIZER & CO., INC
Brooklyn 6, N. Y.

Tentative List of State C

State	Place	Date
Alabama	Edgewater Gulf Hotel, Edgewater Park, Miss.	June 13–15
Arizona	Westward Ho Hotel, Phoenix	April 17–19
Arkansas	Marion Hotel, Little Rock	May 16–18
California	Ambassador Hotel, Los Angeles	June 19–22
Colorado	Hotel Colorado, Glenwood Springs	June 13–15
Connecticut	Banner Lodge, Moodus	June 21–22
Delaware	Commander Hotel, Ocean City, Md. *or* Haddon Hall, Chalfonte or Dennis, Atlantic City, N. J.	June
District of Columbia	Commander Hotel, Ocean City, Md.	June 15–17
Florida	Fort Harrison Hotel, Clearwater	May 22–25
Georgia	Bon Air Hotel, Augusta	April 17–20
Idaho	Shore Lodge, McCall	June 17–19
Illinois	Hotel Sheraton, Chicago	May 15–18
Indiana	French Lick Springs Hotel, French Lick	June 21–23
Iowa	Savery Hotel, Des Moines	February 27–March 1
Kansas	Broadview Hotel, Wichita	March 20–22
Kentucky	French Lick Springs Hotel, French Lick, Ind.	July 25–27
Louisiana	Belmont Motel, Baton Rouge	May 23–25
Maine	*No information*	
Maryland	Bedford Springs Hotel, Bedford, Pa.	July 18–21
Massachusetts	New Ocean House, Swampscott	June 12–14
Michigan	Grand Hotel, Mackinac Island	June 12–14
Minnesota	Hotel Nicollet, Minneapolis	May 1–4
Mississippi	Heidelberg Hotel, Jackson	June 14–16
Missouri	Connor Hotel, Joplin	April 24–25
Montana	Murray Hotel, Livingston	June 12–14
Nebraska	Lincoln Hotel, Lincoln	April 24–25
Nevada	Las Vegas	October
New Hampshire	The Balsams, Dixville Notch	September 11–13
New Jersey	Hotel Berkeley-Carteret, Asbury Park	June 26–30
New Mexico	Albuquerque	June
New York	Saranac Inn, Upper Saranac Lake	June 12–17
North Carolina	O'Henry Hotel, Greensboro	May 15–17
North Dakota	Clarence Parker Hotel, Minot	June 12–14
Ohio	Biltmore Hotel, Dayton	May 15–18
Oklahoma	Skirvin Hotel, Oklahoma City	April 5–7
Oregon	Pendleton Hotel, Pendleton	June 19–21
Pennsylvania	Ambassador Hotel, Atlantic City, N. J.	July 17–20
Puerto Rico		
Rhode Island	Viking Hotel, Newport	June
South Carolina	Poinsett Hotel, Greenville	June 13–16
South Dakota	Marvin Hughitt Hotel, Huron	June
Tennessee	Lookout Mt. Hotel, Chattanooga	June 7–9
Texas	Hotel Texas, Ft. Worth	August 14–17
Utah	Hotel Vernal, Vernal	May 15–17
Vermont	*No information*	
Virginia	Roanoke Hotel, Roanoke	June 19–22
Washington	Hotel Winthrop, Tacoma	June 26–29
West Virginia	The Greenbrier, White Sulphur Springs	August 14–16
Wisconsin	University "Union," Madison	May 31–June 2
Wyoming	*No information*	

State Conventions in 1955

Secretary and Address

Mrs. Thelma M. Coburn, Thomas Jefferson Hotel, Room 403, Birmingham 3, Ala.
Evelyn O. Mills, Ariz. Pharm. Assoc., P. O. Box 5296, Phoenix, Ariz.
William C. Smith, Ark. Pharm. Assoc., 607 Wallace Bldg., Little Rock
Cecil A. Stewart, California Pharmaceutical Assoc., 701 South St., Andrews Place, Los Angeles 5, Cal.
Elizabeth Taft, Colorado Pharmaceutical Assoc., 207 Kittredge Bldg., Denver, Col.
Paul J. Kunkel, Connecticut Pharm. Assoc., 1806 E. Main St., Waterbury, Conn.
Harry C. Zeisig, Delaware Pharmaceutical Assoc., R. D. 2, Milford, Del.

Harold C. Kinner, D. C. Pharmaceutical Assoc., 145 Kennedy St., N.W., Suite 5, Washington, D. C.
R. Q. Richards, Florida Pharmaceutical Assoc., P. O. Box 631, Fort Myers, Fla.
Regina Baird, Georgia Pharmaceutical Assoc., Suite 423, Grand Theatre Bldg., Atlanta 3, Ga.
James Lynch, Idaho Pharmaceutical Assoc., 416 McCarty Bldg., Boise, Idaho.
Thomas J. Vratny, Illinois Pharmaceutical Assoc., 7 S. Dearborn St., Chicago 3, Ill.
Henry W. Heine, Indiana Pharmaceutical Assoc., 8 N. Senate Ave., Indianapolis 4, Ind.
D. L. Bruner, Iowa Pharm. Assoc., 540 Des Moines Bldg., Des Moines 9, Iowa
Clara Miller, Kansas Pharmaceutical Assoc., 824 Kansas Ave., Topeka, Kans.
E. Murphy Josey, Kentucky Pharmaceutical Assoc., 213 St. Clair St., Frankfort 24, Ky.
Albert H. Moore, Lousiana Pharm. Assoc. 2212 Vance Ave., Alexandria, Va.
Edward L. Allen, Maine Pharmaceutical Assoc., 104 Main St., Bangor, Maine
Joseph Cohen, Maryland Pharmaceutical Assoc., 650 W. Lombard St., Baltimore, Md.
Samuel Silverman, Massachusetts Pharmaceutical Assoc., 11 Beacon St., Boston, Mass.
John H. Butts, Mich. State Pharmaceutical Assoc., 1510 Michigan National Tower, Lansing 8, Mich.
Henry W. Moen, Minnesota Pharmaceutical Assoc., 1951 Univ. Ave., St. Paul 4, Minn.
Mrs. W. W. Johnson, Miss. State Pharmaceutical Assoc., University, Miss.
John Hosher, Missouri Pharmaceutical Assoc., 601 Trust Bldg., Jefferson City, Mo.
R. C. Dean, Montana Pharmaceutical Assoc., P. O. Box 908, Helena, Mont.
Cora Mae Briggs, Nebraska Pharmaceutical Assoc., 410 Federal Securities Bldg., Lincoln 8, Neb.
Peter Codner, Nevada Pharmaceutical Assoc., Box 2307, Reno, Nev.
Dr. George A. Moulton, N. H. Pharmaceutical Assoc., 17 Grove St., Peterborough, N. H.
John J. Debus, New Jersey State Pharmaceutical Assoc., 118 W. State St., Trenton 8, N. J.
Nelda Orme, New Mexico Pharmaceutical Assoc., 122 Harvard Drive, S.E., Albuquerque, N. M.
Nicholas S. Gesoalde, New York State Pharmaceutical Assoc., 117 E. 69th St., New York 21, N. Y.
Wm. J. Smith, North Carolina Pharmaceutical Assoc., Drawer 151, Chapel Hill, N. C.
Al Doerr, N. Dak. Pharmaceutical Assoc., Napoleon, N. Dak.
James H. Merritt, Ohio State Pharmaceutical Assoc., 33 N. High St., Columbus, Ohio
Elbert R. Weaver, Okla. Pharmaceutical Assoc., Box 510, Stillwater, Okla.
K. B. Farwell, Oregon Pharmaceutical Assoc., Farwell Pharmacy, Stayton, Ore.
Chauncey E. Rickard, Pennsylvania Pharmaceutical Assoc., 508 N. Third St., Harrisburg
Mrs. Carlota B. Vadi, Puerto Rido Pharmaceutical Assoc., Box 229, San Juan
Charles F. Gilson, Rhode Island Pharmaceutical Assoc., 2030 Smith St., Centredale
J. M. Plaxco, South Carolina Pharmaceutical Assoc., Due West
Bliss Wilson, Box 38, Pierre
Tom C. Sharp, Tennessee Pharm. Assoc., 406 Vendome Building, Nashville 3, Tenn.
C. J. M. Roesch, Texas Pharmaceutical Assoc., 1005 Nueces St., Austin, Texas
Earle F. Gardemann, Zion's Savings Bank Bldg., Suite 207, 12 E. South Temple, Salt Lake City 1, Utah
Mabel B. Clifford, Vermont Pharmaceutical Assoc., Bethel, Ver.
J. Curtis Nottingham, Virginia Pharmaceutical Assoc., 1105 E. Clay St., Richmond, Va.
H. E. Henderson, Washington Pharmaceutical Assoc., 824 White Bldg., Seattle, Wash.
William J. Dixon, West Virginia Pharmaceutical Assoc., Oak Hill, W. Va.
Jennings Murphy, Wisconsin Pharmaceutical Assoc., 161 W. Wisconsin Ave., Milwaukee 3, Wisc.
Ray D. Dame, Jr., Wyoming Pharmaceutical Assoc., Box 1146, Casper, Wyo.

Straight from Headquarters

(from page 85)

for a satisfactory and pleasant way of making a living.

The grouping of general information on health careers, with separate reference to the various professions supplying health services, has great advantages. Pharmacy will be well represented in the publication which will deal with the broad aspects of health careers, as well as specific professions and vocations involved.

Community Health Week

UNDER the theme "Know Your Community Health Resources," the U. S. Junior Chamber of Commerce in cooperation with the National Health Council, in which the AMERICAN PHARMACEUTICAL ASSOCIATION holds membership, will promote Community Health Week activities.

March 21 through 27, 1955, has been designated as Community Health Week. It coincides with the National Health Forum to be conducted by the National Health Council in New York, March 23 and 24, at the Sheraton Astor Hotel.

Local health leaders will join the various local chapters of the U. S. Junior Chamber of Commerce, of which there are 2800, in promoting effective programs to acquaint the public more thoroughly with existing health facilities.

Here is another opportunity for the community pharmacist to demonstrate his health-mindedness by cooperating actively with whatever program the Junior Chamber of Commerce may be developing.

Pharmacists in communities where chapters of the U. S. Junior Chamber of Commerce exist should make inquiries as to what is planned, giving wholehearted assistance to this project and aiding in its development.

The National Health Forum, to be held in New York City March 23 and 24, will deal with the process of forecasting America's health and will consider how health planning will be affected by economic trends, by atomic developments, by new directions in governmental programs, by the march of medical and social science, by the demand for and costs of medical care, and by TV, radio and press.

Edmund N. Gathercoal

ELSEWHERE in this issue we record the death of Dr. Edmund N. Gathercoal, a past-president of the AMERICAN PHARMACEUTICAL ASSOCIATION, Remington medalist and former chairman of the Committee on National Formulary. Dr. Gathercoal was a distinguished teacher, author and research pharmacognocist.

In all of these categories he rendered distinguished service to the profession of pharmacy. It is most interesting to note that following his graduation from the College of Pharmacy of the University of Illinois he conducted a retail pharmacy for a number of years before entering upon a teaching and research career. He was therefore familiar with the problems of the practicing pharmacists and this background served to make his contribution to the progress of pharmacy especially useful.

Hundreds of graduates of the College of Pharmacy of the University of Illinois and the officers and members of the AMERICAN PHARMACEUTICAL ASSOCIATION mourn his loss and join the Council of the A.PH.A. in its expression of appreciation for a life well spent in the interests of science and the profession which he loved and served so well.

Richards Succeeds Sanford

THE COUNCIL of the AMERICAN PHARMACEUTICAL ASSOCIATION at a meeting held in Washington February 4, elected Mr. R. Q. Richards, past president of the ASSOCIATION, to serve out the unexpired term of the late Roy L. Sanford as a member of the Council. Mr. Sanford's term was due to expire in 1956.

Drugs Declared Habit-Forming

PRESIDENT EISENHOWER has made effective, by proclamation, a Treasury Department finding that the following drugs come within the definition of "opiate" of the Internal Revenue Code because their addiction-forming and addiction-sustaining liability is similar to morphine:

3-methoxy-N-methylmorphinan, its racemic and levorotatory forms, and their salts, but excepting its dextrorotatory form and its salts.

4 - (3 - Hydroxyphenyl) - 1 - methyl - 4-piperidyl ethyl ketone (ketobemidone) and its salts.

New and Nonofficial Remedies

DIPHEMANIL METHYLSULFATE—Prantal Methylsulfate (Schering)—Diphemanil methylsulfate is a quaternary parasympatholytic agent that selectively blocks the transmission of nerve impulses through parasympathetic ganglia. It may be injected subcutaneously or intramuscularly, in doses of 0.5 mg. per Kg. of body weight four times daily, for initial control of symptoms or acute episodes caused by peptic ulcer, pylorospasm, and gastric hyperacidity and motility in hypertrophic and other forms of gastritis. The adult oral dose for initial treatment or after injection to control acute symptoms is 100 mg. every four to six hours (between meals). With prolonged action tablets 100–200 mg. every eight hours can be administered. For treatment of hyperhidrosis or control of sweating aggravating dermatoses the dose is 100–200 mg. three times daily, with lower maintenance dosage.

Detailed information on the abstracted monographs of products recently accepted by the A.M.A. Council on Pharmacy and Chemistry appears in the current issues of THIS JOURNAL, *Scientific Edition*.

Prantal Methylsulfate Solution: 10-cc. vials. A solution containing 25 mg. of diphemanil methylsulfate in each cc. Preserved with 0.18% methylparaben and 0.02% propylparaben. **Prantal Methylsulfate Tablets:** 0.1-Gm. **Prantal Methylsulfate Repetabs** (Repeat Action Tablets): 0.1-Gm. U.S. trademark 572,532. Schering Corporation, Bloomfield, N.J.

OXYTETRACYCLINE-POLYMYXIN B—Terramycin Hydrochloride with Polymyxin B Sulfate (Pfizer)—Oxytetracycline-polymyxin B, a mixture of oxytetracycline HCl and polymyxin B sulfate, is useful for ophthalmic application in the prevention and treatment of pyogenic mixed surface infections of the eye, particularly when complicated by the presence of *Pseudomonas aeruginosa*. The mixture is applied as an ophthalmic ointment containing the equivalent of 5 mg. of oxytetracycline base and 10,000 units of polymyxin B base per Gm. A small amount of ointment is applied to each affected eye four to six times daily.

Terramycin Hydrochloride with Polymyxin B Sulfate Ophthalmic Ointment: 3.54-Gm. tubes. An ointment containing 5 mg. of oxytetracycline as the hydrochloride and 10,000 units of polymyxin B as the sulfate (equivalent to 1 mg. of polymyxin B sulfate) in each Gm. U.S. patent 2,516,080. U.S. trademark 577,504. Pfizer Laboratories, Division of Chas. Pfizer & Co., Inc., Brooklyn, N.Y.

ESTRADIOL CYCLOPENYTLPROPIONATE—Estradiol cyclopentylpropionate has the same actions and uses as estradiol and its other fat-soluble esters. In women in the menopause the average duration of estrogenic action as measured by vaginal smear, is about three to four weeks after a single injection of 5 mg. in oil. Administered in oil solutions by intramuscular injection only, initial doses of 1–5 mg. are injected once weekly for two or three weeks, then for maintenance the dosage interval may be three to four weeks.

Solution Depo-Estradiol Cyclopentylpropionate in Oil: 10-cc. vials. A solution in cottonseed oil containing 1 mg. of estradiol cyclopentylpropionate in each cc. Five-cc. vials. A solution in cottonseed oil containing 5 mg. of estradiol cyclopentylpropionate in each cc. Preserved with 0.5% chlorobutanol. U.S. patent 2,611,773. U.S. trademark 515,760. The Upjohn Company, Kalamazoo, Mich.

VIOMYCIN SULFATE—Vinactane Sulfate (Ciba)—Viocin Sulfate (Pfizer)—Viomycin sulfate is the salt of a strongly basic polypeptide antibiotic substance or substances produced by growth of *Streptomyces puniceus* on suitable culture media. It is an antituberculous agent effective against both streptomycin-sensitive and streptomycin-resistant strains of tubercle bacilli. For most forms of tuberculosis an intramuscular (gluteal, thigh, or deltoid, in rotation) dose of 2 Gm. (1 Gm. then repeat after 12 hours) every third day is recom-

N.N.R.

mended, either alone or with *p*-aminosalicylic acid (12 Gm. daily, orally). Dosage should be much less if renal function is impaired.

Vinactane Sulfate Powder: Vials containing the equivalent of 1 Gm. of viomycin as the sulfate. U.S. patent 2,633,445. Ciba Pharmaceutical Products, Inc., Summit, N.J.

Viocin Sulfate Powder: Vials containing the equivalent of 1 Gm. of viomycin as the sulfate. Pfizer Laboratories, Division of Chas. Pfizer & Co., Inc., Brooklyn, N.Y.

STANOLONE—Neodrol (Pfizer)—Stanolone is an androgen that has the same actions and uses as testosterone and its esters. (See N.N.R. general statement on testes.) It is useful clinically for its anabolic and tumor-suppressing actions in selected cases of inoperable carcinoma of the breast or postoperative metastatic carcinoma of the breast. Stanolone is administered by intramuscular injection, 100 mg. daily. Like free testosterone, an aqueous suspension of microcrystalline stanolone produces a slightly less intense and slightly more prolonged androgenic action than an equivalent oil solution of its propionic acid ester.

Neodrol Suspension: 10-cc. vials. A saline suspension containing 50 mg. of stanolone in each cc. Preserved with 0.18% methylparaben and 0.02% propylparaben. Pfizer Laboratories, Division of Chas. Pfizer & Co., Inc., Brooklyn, N.Y.

ZINCHLORUNDESAL.—Salundek (New) (Wallace & Tiernan).—A mixture containing 2% 5-chlorosalicylanilide, 1% 5,3′-dichlorosalicylanilide, 1% 5,4′-dichlorosalicylanilide, 3% salicylanilide N.F., 2% undecylenic acid N.F., and 10% zinc undecylenate N.F. Zinchlorundesal is effective topically in the treatment of tinea capitis caused by *Microsporon audouini*. Its use generally should be restricted to this purpose because of its potential irritant effects, although zinchlorundesal is also effective in the treatment of superficial dermatomycoses. It is applied topically as the ointment by rubbing on the effected and adjacent areas twice daily.

Salundek Ointment (New): 28.3-Gm. tubes and 454-Gm. jars. An ointment containing 0.1 Gm. of zinc undecylenate, 30 mg. of salicylanilide, 20 mg. of 5-chlorosalicylanilide, 20 mg. of undecylenic acid, 10 mg. of 5,3′-dichlorosalicylanilide, and 10 mg. of 5,4-dichlorosalicylanilide in each Gm. U. S. trademark 572,472. Wallace & Tiernan, Inc., Belleville, N. J.

NNR Additional Articles Accepted

Cyanocobalamin

Solution Crystalline Vitamin B_{12} with Benzyl Alcohol 1.5%: 10- and 30-cc. vials. A solution containing either 30 or 50 mcg. of cyanocobalamin in each cc. Bio-Intrasol Laboratories, Inc., Brooklyn, N. Y.

Solution Vibalt with Benzyl Alcohol 1.5%: 10-cc. vials. A solution containing 50 mcg. of cyanocobalamin in each cc. U. S. trademark 547,447. J. B. Roerig & Company, Chicago, Ill.

Dia-Mer-Sulfonamides—*Tablets Merdisul:* 0.5-Gm. Each tablet contains 0.25 Gm. each of sulfadiazine and sulfamerazine. *Hexett Tablets Merdisul:* 0.13-Gm. Each tablet contains 64.8 mg. each of sulfadiazine and sulfamerazine. The Bowman Bros. Drug Company, Canton, Ohio.

Dienestrol—*Tablets Dienestrol:* 0.1-, 0.25-, 0.5-, and 5-mg. Lloyd & Dabney Company, Inc., Cincinnati, Ohio.

Hydrocortisone—*Tablets Cortef:* 5- and 20-mg. U. S. trademark 583,191. The Upjohn Company, Kalamazoo, Mich.

Meperidine Hydrochloride-U. S. P.—*Solution Demerol Hydrochloride:* 1-cc. ampuls. A solution containing 50 mg. of meperidine hydrochloride in each cc. U. S. patent 2,167,351. U. S. trademark 381,130. Winthrop-Stearns, Inc., New York, N. Y.

Methyltestosterone-U. S. P.—*Tablets Methyltestosterone:* 10-mg. S. J. Tutag & Company, Detroit, Mich.

Procaine Penicillin G-U. S. P.—*Aqueous Suspension Procaine Penicillin G with Procaine Hydrochloride 2%:* 10-cc. vials. A suspension containing 300,000 units of procaine penicillin G and 20 mg. of procaine hydrochloride in each cc. Preserved with 0.18% methylparaben and 0.02% propylparaben. *Procaine Penicillin G in Oil:* 10-cc. vials. 300,000 units in each cc. of sesame oil with 2% aluminum monostearate. The Vitarine Company, Inc., New York, N. Y.

Protein Hydrolysates—*Solution Amigen 5% with Dextrose 10%:* 1-liter bottles. Each 100 cc. contains 5 Gm. of protein hydrolysate and 10 Gm. of dextrose. Mead Johnson & Company, Evansville, Ind.

Testosterone Cyclopentylpropionate—*Solution De-po-Testosterone Cyclopentylpropionate:* 1-cc. vials. A solution in cottonseed oil containing 0.1 Gm. of testosterone cyclopentylpropionate in each cc. Preserved with 0.5% chlorobutanol. The Upjohn Company, Kalamazoo, Mich.

Testosterone Propionate-U. S. P.—*Solution Testosterone Propionate in Oil with Benzyl Alcohol 10%:* 10-cc. vials. A solution in sesame oil containing 0.1 Gm. of testosterone propionate in each cc. Preserved with 0.5% chlorobutanol. Testagar & Company, Inc., Detroit, Mich.

Thiamine Hydrochloride-U. S. P.

Solution Thiamine Hydrochloride: 10-cc. vials. A solution containing 10 mg. of thiamine hydrochloride in each cc. Preserved with 0.35% chlorobutanol. J. B. Roerig & Company, Chicago, Ill.

Tablets Thiamine Hydrochloride: 10-mg. Success Chemical Company, Inc., Brooklyn, N. Y.

Thichloroethylene-U. S. P.—*Trilene:* 15-cc. tubes. Each tube contains 15 cc. of trichloroethylene. Ayerst Laboratories, Inc., New York, N. Y.

New Generic and Brand Names Recognized by the A.M.A. Council on Pharmacy and Chemistry

POLIOMYELITIS IMMUNE GLOBULIN (HUMAN) for a preparation of gamma globulin primarily assayed for its content of poliomyelitis antibodies in accordance with standard procedures licensed by the National Institutes of Health

POLYMONINE for a formaldehyde polymer of N-methylhomoanisylamine

CRYSTALLINE TRYPSIN for a highly purified preparation of that enzyme as derived from mammalian pancreas glands: Tryptar (Armour Laboratories)

WARFARIN (SODIUM) for 3-(α-acetonylbenzyl)-4-hydroxycoumarin and its sodium salt: Coumadin (Sodium) (Endo Products, Inc.)

LENTE INSULIN for a suspension of zinc insulin crystals and amorphous insulin: Lente Iletin (Eli Lilly and Company)

MEPARFYNOL for 2-ethinylbutanol-2

PENTAPHONATE: Claraphos (Ernst Bischoff Company, Inc.)

FDA Criminal Actions

Drugs and devices that were subpotent for falsely labeled accounted for 16 seizures in December under violations of the Federal Food, Drug, and Cosmetic Act.

One of the drug seizures involved "*Rauwolfia serpentina* powder" which contained a material proportion of the ground root of a species of Rauwolfia other than *Rauwolfia serpentina*—the only species whose safety has been established under new-drug requirements.

Over-The-Counter Sales

Cypress, Calif.—Sold amphetamines and hormones without prescription. Fined $350 and placed on probation for one year.

Atlanta, Ga.—Sold amphetamine and barbiturates without prescription. Owner fined $150 and placed on probation for two years; employee placed on probation for one year.

Baton Rouge, La.—Sold amphetamine without prescription. Fined $300.

Minneapolis, Minn.—Sold barbiturates and Chloromycetin without prescription. Owner fined $500; each defendant placed on probation for two years.

Nebraska City, Nebr.—Refilled prescriptions for amphetamine and barbiturates without physicians' authorizations. Firm fined $225 and court costs of $46; individual fined $150.

Albuquerque, N. Mex.—Refilled prescriptions for barbiturates without physicians' authorizations. Fined $150 each.

Albuquerque, N. Mex.—Sold thyroid without physicians' prescriptions. Fined $150.

New York, N. Y.—Sold and refilled prescriptions for amphetamine and sulfonamides without physicians' authorizations. Owner fined $500; others fined $25 and placed on probation for one day, and $50 and placed on probation for one day.

Yonkers, N. Y.—Sold and refilled prescriptions for amphetamines, barbiturates, hormones and sulfonamides without authorization. Owner fined $225 and placed on probation for one day; employees fined $25 each.

Cincinnati, Ohio—Sold Butazolidin and Banthine without physicians' prescriptions. Fined $150.

Cincinnati, Ohio—Sold paraldehyde and Orthoxine hydrochloride without physicians' prescriptions. Fined $500.

Milwaukee, Wis.—Refilled prescriptions for barbiturates without physicians' authorizations. Fined $700.

Injunction

Dr. Reilly's, Inc., and Hunter Enterprises, Inc., Milwaukee, Wis.—Enjoined from interstate shipments of "Dr. Reilly's Applicator and Dilator Assembly" and "Dr. Reilly's Rectal Remedy Pile-Aid," which would be dangerous to health when used as directed for the treatment of rectal disorders.

New A.Ph.A. Members

CALIFORNIA

Burston, Julius, Pasadena
Kagel, Fritz R., Stockton
Lowe, Francis, San Francisco
Pescaro, Mary Ann, Napa
Smith, James D., San Bernardino
Staykow, Dimiter G., San Carlos

COLORADO

Davis, William M., Denver

DELAWARE

Johnson, C. Emerson, Newark

FLORIDA

Blumberg, Maurice, Miami Beach
Crown, Sidney, Miami Beach
Fierman, Jules, Miami Beach
Fleischman, Louis, Miami Beach
Grossman, Herb, Coral Gables
Hathaway, James C., Miami
Howell, George S., Jr., Fort Walton Beach
Ignelzi, A. Jerry, Coral Gables
Jablo, Jack L., Miami Beach
Kuppersmith, Martin F., Miami Beach
Lazarus, Herbert C., Miami
Newman, Abraham, Miami Beach
Prather, Benton T., Miami Springs
Rubin, Abe J., Miami Beach
Scheibler, Jeanne Louise, Miami
Schrager, Bernard, Miami Beach
Spanier, Jack, Miami Beach
Susel, Benjamin E., Miami Beach
Waller, William L., Miami Beach

ILLINOIS

Schlan, George L., Chicago
Sister Jolinda Snyder, Springfield
Sister Baleria Messerich, Springfield

INDIANA

Delbauve, Paul A., Indianapolis
Hadley, Frederic M., Indianapolis
Hand, Edward J., Terre Haute
Pinella, Joseph T., Indianapolis
Wheeler, Milton R., Indianapolis

KANSAS

Sister Mary Andrew Talle, Kansas City

KENTUCKY

Frankel, Harold D., Winchester
McConnell, William G., Kuttawa

MARYLAND

Cooley, William A., Cumberland
Proudfoot, Robert E., Oakland

MASSACHUSETTS

Fournier, Raymond J., Shelburne Falls
LaRoche, Normand A., Williamsett
MacIntyre, Gordon, Walpole
O'Brien, John V., Blackstone

MICHIGAN

Jacobs, R. E., Hastings
Mossman, Vernon C., Port Huron

MINNESOTA

Appel, William F., Minneapolis
Snyder, Harold H., St. Paul

MISSOURI

Burns, Wanda E., St. Louis
Fawks, Robert C., North Kansas City
Klostermann, Roy J., St. Louis

NEW JERSEY

Entrekin, Durward N., New Brunswick
Farias, Remo, Orange
Schimmel, Jerome, New Brunswick

NEW YORK

Blumberg, Harold, Richmond Hill
Breakey, Ralph S., Jr., Monticello
Luebbert, Edward G., Newark
Reiter, Norman, Brooklyn
Taylor, Charles T., New York City
Zuttis, Bernhard A., Astoria
Zwilling, Vera D'Ambrosio, New York City

NORTH CAROLINA

Alligood, Jarvis M., Greenville

OHIO

Bruehler, George H., Cleveland
Howard, C. W., Lakewood
Loomis, Richard A., Fremont
Plogman, Edward H., Silverton
Stocksager, Glen R., Ludlow Falls

OKLAHOMA

Sawyer, William F., Sapulpa

PENNSYLVANIA

Maliniak, Michael, Shamokin
Whitman, William H., Pittsburgh

SOUTH CAROLINA

Plaxco, J. M., Jr., Columbia

TENNESSEE

Charp, Harry K., Chattanooga
Derryberry, Betty, Columbia

TEXAS

Boblitt, Robert L., Houston
Cleveland, T. H., Dublin
Rouse, Hugh L., Houston

VERMONT

Letourneau, George R., Essex Junction

VIRGINIA

Crotty, Melvin W., Arlington

WYOMING

Mason, Thomas F., Cheyenne

FOREIGN

Klie, Hans-Emil, Hamburg, Germany
Portilla, Carlos M., Havana, Cuba

Deceased Members

Emrich, William, Orlando, Fla., Aug. 21, 1954
Gathercoal, Edmund Norris,, Pentwater, Mich., Dec. 27, 1954 (Life Member)
Meyer, E. Walter, Cary, Ill., June 1954
Shindler, O. C., Bandon, Ore.
Sister Mary Beatrice, Darby, Pa., Sept. 21, 1954
Wildhack, Henry J., Newark, N. Y.
Winston, Milton D., North Miami Beach, Fla., Oct. 19, 1954

Obituaries

Dr. Edmund N. Gathercoal, a past-president of the AMERICAN PHARMACEUTICAL ASSOCIATION and former chairman of the Committee on National Formulary, died December 27.

Dr. Gathercoal was born near Sycamore, Ill., in 1874. He studied pharmacy at the University of Illinois and later attended Rush Medical College. He was awarded the Remington Honor Medal in 1936. The following year he was elected president of the AMERICAN PHARMACEUTICAL ASSOCIATION.

From 1930 to 1940, Dr. Gathercoal was chairman of the Committee on National Formulary. He was the author of a textbook and a number of articles dealing with his researches in pharmacognosy.

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A.PH.A. Branches

LOCAL

The Armed Forces Medical Library was the site of the latest **City of Washington, D. C.,** Branch meeting. Director Lt. Col. Frank Rogers spoke on the services available to pharmacists at the library. Several rare pharmaceutical volumes, normally housed in Cleveland, were brought to Washington especially for the meeting.

Eunice Bonow, secretary of the **Southeast Wisconsin** Branch, is both cheerful and realistic about the attendance problem. She writes: "This is the second year that we have planned our program in advance of the first meeting. One thousand copies of the program went to all Wisconsin members of the AMERICAN PHARMACEUTICAL ASSOCIATION and the pharmacists of Milwaukee County, Racine and Kenosha. One week before the meeting a reminder is sent. In terms of per cent, this is not too effective for I mailed 1,046 notices and 51 persons were present. The encouraging note is that our attendance is increasing and that about 50 per cent are recent graduates. A lively discussion period has followed each speaker—this too is encouraging." Their November session heard an ophthalmologist speak on the importance of sterile eye medications. Antacids and analgesics in self-medication were discussed by two faculty members of the University of Wisconsin at the January meeting.

Osteopathy—fact and fancy—was presented before the **Northern New Jersey** Branch. Dr. George W. Northrup, president of the New Jersey Association of Osteopathic Physicians and Surgeons, called on the pharmacist for "assistance with the ever-growing trend of new drug developments."

A.PH.A. staff member Charles Rabe visited the **Baltimore** Branch in January. He discussed the services offered at ASSOCIATION headquarters and some of the problems that arise. The group also heard a half-hour of transcribed music and announcements in connection with the regular TV and radio public relations program of the Maryland Pharmaceutical Association and Baltimore Retail Druggists' Association.

The **Philadelphia** Branch was briefed on the expanding application of new drugs and improved therapy for the mentally disturbed by Dr. James Ewing, psychiatry professor at the University of Pennsylvania. At dinner preceding the session George Archambault, A.S.H.P. president, spoke on "What's Ahead for Hospital Pharmacy."

The pharmacist can be a prime agent in the prevention of accidental poisoning in children. That was the theme of Dr. R. Gibbs, Minneapolis pediatrician, at a meeting of the **Northwestern** Branch. It was up to the pharmacist, Dr. Gibbs maintained, to educate parents by means of over-the-counter advice.

A therapeutic newcomer and an ancient remedy in its modern aspects—chlorpromazine and *Rauwolfia serpentina*—were the subjects of recent meetings of the **Philadelphia** Branch.

The **New York** Branch recently heard Dr. Russell F. Calhoun talk on "Present Status of Rabies." Dr. Calhoun is associate director of the Clinical Department of Lederle Laboratories.

STUDENT

The first branch meeting of 1955 at the **Massachusetts College of Pharmacy** heard Dr. Lendon Snedeker on the newly established Boston Poison Information Center. With headquarters at Children's Hospital, the center provides physicians with antidote information. Local pediatric associations hope to finance a handbook on the subject.

The next 10 years, according to Dr. Hugo Schaefer, dean of **Brooklyn College of Pharmacy,** will see the solution to ARB (any reliable brand) and duplication, fair trade nonadherence, and clinic-dispensing pharmacies. Dr. Schaefer spoke before the **Fordham** unit, concluding that "pharmacy needs a stronger AMERICAN PHARMACEUTICAL ASSOCIATION with its universality of interests as against the special interest groups."

Biruta Zilmanis of **Connecticut's College of Pharmacy** writes that their last speaker, Dr. W. H. Camp, had been to South America rather than Africa as reported. Dr. Camp mentioned a drug obtained from a plant similar to Pyrethrum of the *Compositae* family used by the natives as an insecticide for infants.

Heart disease therapy and the particular application of Rauwolfia, Reserpine, Hydralazine, Ansolysen and Veratrum were presented to **Albany College of Pharmacy** members at a recent session. A subsequent meeting dealt with hormones and cancer.

Ohio Northern's group saw the Lederle movie on sulfonamide therapy. . . . **Wyoming University's** branch is making plans for the information booth it will man at the forthcoming University Open House.

Panel discussions are getting increased attention. **University of Nebraska** unit has considered the topics suggested in the A. PH. A. list. And **Purdue University** members heard a doctor and pharmacist outline the relationship that should exist between their professions, the ideal: a friendship not necessarily based on business interest. . . .**Wayne's** Branch decided to hold several meetings this year devoted to group discussion.

Two controversial aspects of the pharmaceutical career were treated by Henry Faser before the **University of Mississippi** unit. Dr. Faser, formerly dean of the university's School of Pharmacy, stated he left his teaching post because of the low salary. He also stated that parmaceutical houses have markedly affected the practice of pharmacy.

The problem of evolving a full and interesting program that would avoid conflict with examinations was undertaken by the **Rutgers University College of Pharmacy** Branch at a joint meeting which included class and fraternity officers. It was decided that the Branch president would act as coordinator among faculty and group leaders, with program schedules made available to them well in advance of the events. Furthermore, group leaders obligated themselves to an attendance quota. The program for the current school year includes two joint meetings with the Northern New Jersey Branch of the A.PH.A. and a seminar series at which the scientific, merchandising, and human-relations aspects of pharmacy are to be covered.

Clinicians Weigh New TB Antibiotic

In Atlanta last month, three clinicians unveiled a new antibiotic which has produced impressive improvement in severe pulmonary tuberculosis cases and favorable results in fighting stubborn infections of the genito-urinary tract. The occasion was the 14th Veterans Administration Army-Navy Conference on the Chemotherapy of Tuberculosis, held in cooperation with the National Tuberculosis Association.

Trade-marked Seromycin (cycloserine), the new antibiotic is a product of research by Commercial Solvents Corp. of Terre Haute, Ind., now joined by Eli Lilly and Company.

In introducing Seromycin, the three clinicians—Drs. Israel Epstein, K. G. S. Nair, and Linn J. Boyd, all of New York—pointed out the antibiotic had been given to 37 severe pulmonary tuberculosis patients in 1–1.5 Gm. daily dosage over a three-to-four-month period with these results:

Thirty-six patients showed clinical improvement, that is, they looked and felt better.

X-rays showed some improvement of the infected lung areas in 28 patients.

Thirty patients gained four to 14 pounds over a 16-week period.

Fever was reduced in all patients.

Simple smears of sputum and gastric concentrates, previously positive for the tubercle bacillus in all subjects, tested negative in 30 patients.

Further, 29 of these cases were "chronic, far advanced, but active pulmonary cases which had failed to respond to intensive antimicrobial therapy during a year or more."

Seromycin has shown some toxicity, the trio reported. Because of this, it was withdrawn in four cases.

In a joint statement, officials of Commercial Solvents and Eli Lilly said: "While Seromycin looks promising in the treatment of tuberculosis and genito-urinary infections, it is still too early to define the extent of its medical usefulness. The record shows that other drugs which at first produced remarkable results were prematurely hailed as 'cures'. . . . This experience dictates caution in evaluating Seromycin."

Immediately ahead for Seromycin was a pilot study by the Veterans Administration.

Against staphylococci

This is an actual strain of *staphylococcus aureus*, isolated from a 5-week-old infant. Note extreme sensitivity of the organism to ERYTHROCIN—although it easily resists penicillin and three broad-spectrum antibiotics. This organism may be associated with *sinusitis . . . otitis media . . . tonsillitis . . . abscess . . . bronchopneumonia . . . empyema . . . carbuncle . . . pyoderma . . . bronchiectasis . . . furunculosis . . . pharyngitis . . . septicemia . . .* and *tracheobronchitis.*

for specific therapy against coccic infections...

Wide-range activity against gram-positive pathogens—that's the story of ERYTHROCIN *Filmtab*. As you know, most bacterial respiratory infections are produced by staph-, strep-, or pneumococci. *And that is the very range where* ERYTHROCIN *is most effective.* In fact, you'll find it more active against this group of organisms than many other antibiotics.

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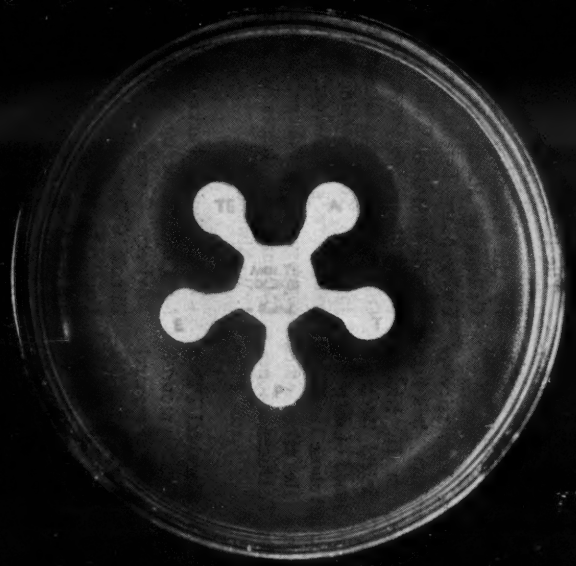
"This is the ad your physicians are seeing on the new Filmtab ERYTHROCIN."

"This is the ad your physicians are seeing on the new Filmtab ERYTHROCIN."

Against common intestinal flora



This sensitivity test shows ERYTHROCIN, penicillin and three broad-spectrum antibiotics against a typical strain of *E. coli*. Note that ERYTHROCIN and penicillin do not affect growth of the organism—*while all three broad-spectrum antibiotics show marked inhibitory action.* Since ERYTHROCIN is inactive against gram-negative organisms, it is less likely to cause alteration in common intestinal flora—with an accompanying low incidence of side effects.

...with little risk of serious side effects

One reason is because the drug acts specifically. It destroys coccic invaders, yet doesn't materially change the normal intestinal flora. Thus, side effects are rarely encountered with ERYTHROCIN. Nor does it cause the allergic reactions occasionally seen with penicillin therapy. Abbott

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Milestones

Associations

Dr. W. Lewis Nobles, associate professor of pharmacy and pharmaceutical chemistry at the University of Mississippi and a member of the A.PH.A., has received a grant from the **National Science Foundation.** He is one of a limited number active in schools of pharmacy to have received this award.

The *Scientific Edition* of THIS JOURNAL published two articles on the Mannich Reaction by Dr. Nobles in the November, 1954, issue. The N.S.F. grant will be used by Dr. Nobles to continue this important research.

Kelly Edmond Bennett, now serving his 14th year as mayor of Bryson City, N. C., has been designated North Carolina's "Pharmacist of the Year" by the **North Carolina Pharmaceutical Association.** He has served several terms in the State legislature as a senator, five years as a member of the State Board of Pharmacy, and numbers membership in the AMERICAN PHARMACEUTICAL ASSOCIATION among his many affiliations.

Dr. Robert S. Warner, formerly director of the Division of Graduate and Postgraduate Medical Education at the University of Utah College of Medicine, has been appointed assistant medical director of the **American Heart Association.** Dr. Warner's primary responsibility will be the development of the association's professional medical education program.

Dr. Wendell M. Latimer, University of California professor of chemistry, has been selected for the 1955 William H. Nichols Medal of the **American Chemical Society's** New York Section. . . .The board of directors of the **National Health Council** chose Dr. Hugh R. Leavell president-elect. He takes office next March, succeeding Dr. T. Duckett Jones, who died November 22.

The winner of the **United Cerebral Palsy-Max Weinstein Award** was Dr. Seymour S. Kety, associate director in charge of research of the National Institutes of Neurological Diseases, Blindness and of Mental Health, U. S. Public Health Service. Dr. Kety, 39, received the award, consisting of $1,000 and a plaque, for his pioneering work in measuring the blood flow through the human brain.

William Benka, chief pharmacist at Milwaukee County General Hospital for the past 18 years, has been awarded the *Mortar and Pestle* pin of the AMERICAN PHARMACEUTICAL ASSOCIATION in recognition of his work in pharmacy. Benka was president of the Southeastern Wisconsin Branch of the A.PH.A. in 1952–1953.

Dr. Robert W. Berliner has been appointed associate director in charge of research at the **National Heart Institute.** He will occupy the position formerly held by Dr. James A. Shannon, who now is associate director of the National Institutes of Health, of which the Heart Institute is a unit.

Colleges

The **Philadelphia College of Pharmacy and Science** is one of 10 universities in the Philadelphia area chosen to continue the second semester of WFIL-TV University of the Air. Lectures by members of the Philadelphia College, which started February 4, are from 11:35 A.M. to noon, Friday mornings, and will continue through May 27.

The 1954 Greater St. Louis awards for outstanding service to pharmacy are announced by the Alumni Association of the **St. Louis College of Pharmacy and Allied Sciences:** Sister Mary Berenice, chief pharmacist, St. Mary's Hospital; William T. Dooley, Jr., vice president, Lewis-Howe Company; Morris Glaser, president, Glaser Drug Company; James H. Koch, president, Koch Drug Company; Frank L. Mercer, professor of pharmacognosy at the College, as well as Thomas J. O'Donnel, Sr., James W. Ross and Clarence J. Wohlwend.

C. D. Smith, Parke-Davis branch manager for Chicago, begins a five-year term on the Advisory Committee to the **University of Illinois College of Pharmacy.** . . .**Columbia University's** new nine-story pharmacy building will be located on the campus. It will include facilities for handling radioactive materials. . . .Dr. John G. Adams becomes assistant dean of **Duquesne's School of Pharmacy.**

Mario M. Alonzo led recent graduates of **Rutgers College of Pharmacy** with the highest weighted average in his class, walking off with five of the top senior scholastic prizes. He was presented the Bernard Ackerman Memorial Award, the Lehn and Fink Prize, the Borden Scholarship Award in Pharmacy, and was declared cowinner of the Merck and New Jersey Pharmaceutical Association awards. The gifts were books, a medal, and cash.

Rho Chi activity: Initiation banquet given by **Florida University's** Iota Chapter for incoming officers. . . .**Philadelphia College** Rho Chi citation goes to Dr. John C. Krantz, Jr., pharmacology professor at **University of Maryland.**

Manufacturers

This year's Certificate of Management Excellence goes to **Chas. Pfizer & Co.** The American Institute of Management bases its award on an audit made among U. S. and Canadian companies. . . .A new Hospital Sales Service Section is announced by **Smith, Kline & French Laboratories**. . . .New president of **Johnson & Johnson International** is Antonio E. Rebollo. Replacing him as vice president is Raymond J. Sadlier.

Abbott Laboratories and **General Electric Company's** Silicone Products Department have jointly announced completion of a project making radioactive silicones available for medicine and industry. Abbott Laboratories was the first pharmaceutical company to explore the possibility of radioactive isotopes for medicine and is still the only organization supplying these materials to the medical profession. They are used in diagnosis and treatment of disease and study of body functions. . . .During the last three months **Ciba Pharmaceutical Products** has awarded a total of $49,000 in grants to research workers and institutions throughout the United States for clinical and laboratory investigation. . . .The Prescription Products Department at Borden's is now headed by Dr. J. F. Muller. He is the discoverer of Mull-Soy, designed for people allergic to cow's milk.

George H. McGlynn, vice president and treasurer of **Magnus, Mabee & Reynard,** has been appointed a member of the Executive Committee of the Drug, Chemical and Allied Trades Section of the New York Board of Trade. . . .The appointment of Roy R. Conner as marketing manager for veterinary products has been announced by **Schering Corporation**. . . .Elmer Bobst, chairman of the board of **Warner-Hudnut,** has been elected to the board of directors of the National Hospital for Speech Disorders, 61 Irving Place, New York, N. Y.

The Philippines will soon have a local source for antibiotics. A new Pfizer plant on the outskirts of Manila will go into the production of Terramycin, Tetracyn and other pharmaceuticals. A monthly seminar at the plant will bring the latest medical information to local doctors and public health officials. . . .Dr. Joseph G. Bird has been appointed a member of the executive committee of the **Sterling-Winthrop** Research Institute with the specific function of clinical pharmacologist.

Dr. Marlin T. Leffer, associate director of research of **Abbott Laboratories,** has been elected chairman of the American Chemical Society's Division of Medicinal Chemistry for 1955. He succeeds Professor Alfred Burger of the University of Virginia. . . .Dr. John A. Ellegood, director of pharmaceutical control for **Sharp and Dohme** since 1946, is appointed to succeed Dr. Paul S. Pittenger as director of quality control. . . .Dr. Max Tishler is vice president for scientific activities of the Chemical Division, **Merck & Company.** The newly created position of director of sales and marketing in the same division has been filled by Thomas J. Treacy.

Heading an expanded research program is Harold W. Werner, director of the **William S. Merrell Co.** scientific laboratories and recently elected vice president in charge of research. More appointments: Karl Huber now personnel director of **Ciba**. . . .Roy A. Hecht, M.D., of Chicago, named assistant medical director of **Armour Laboratories**. . . .Allan A. Miller as marketing manager, a new post in the **Schering Corp's.** Domestic Sales Division. . . .Dr. J. Edward Wolff as head of the pharmaceutical development laboratory at **Sterling-Winthrop Research Institute**. . . .Thomas W. Newell, assistant to R. Blayne McCurry, president of **Schenley Laboratories, Inc.**. . . .Dr. Harriet A. Geer now senior research chemist at **Parke, Davis & Company.** . . .Robert E. Heine becomes director of **Eli Lilly and Company's** production planning unit.

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